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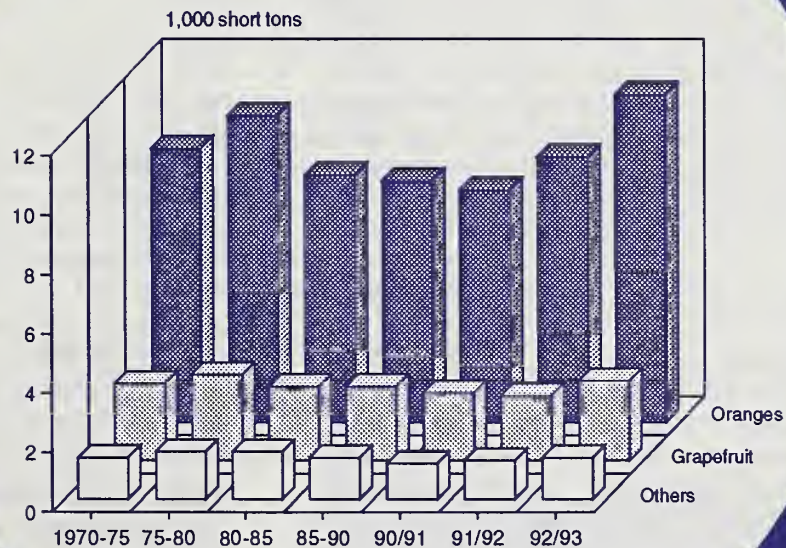
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Fruit and Tree Nuts

Situation and Outlook Report

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U.S. Citrus Fruit Production



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Summary

Citrus fruit prices, at both grower and retail levels, have been well below year-earlier prices for most of 1992. However, apple prices were record high until dampened by the new crop. Large 1992/93 crops are expected to provide ample fruit supplies and lower prices.

U.S. Citrus Crop Forecast Is Largest Since 1979/80

The 1992/93 U.S. citrus crop is expected to be the largest in 13 years. Florida citrus output is forecast to increase 31 percent due to favorable weather and a larger number of bearing acres and trees. California citrus production is forecast up 4 percent. While Texas citrus output is expected to be the highest since the December 1989 freeze, the forecast is only 25 percent of prefreeze production.

World orange juice production will rise significantly this season as Florida's orange crop is forecast up 33 percent and a larger Brazilian crop is expected. Increased supplies will move prices of processing oranges and orange juice lower. The larger Florida orange crop and increased orange juice production in 1992/93 likely will reduce U.S. orange juice imports. Imports are a residual supply in the U.S. orange juice market, ranging from 28 percent of domestic consumption in 1990/91 to over 46 percent in 1989/90.

Ample supplies of fresh-market oranges are expected in 1992/93 due to an 8 percent larger California navel crop, although Valencia production is expected to be down 3 percent. Overall, 1992/93 California orange output will be up slightly from 1991/92 and prices of fresh-market oranges will remain lower.

California orange production made an excellent recovery from the December 1990 freeze. USDA's October estimate placed California 1991/92 all-orange production up 158 percent from the freeze-damaged 1990/91 crop. Navel orange output more than doubled, and California's 1991/92 Valencia orange crop is expected to be three times the 1990/91 crop -- the second largest on record.

Near-record production of Florida grapefruit is expected to boost U.S. production and lower prices in 1992/93. Florida prices for processing grapefruit improved in 1991/92 with less production and reduced juice inventories. However, fresh-use prices were mostly down from the year earlier as a result of the large 1991/92 California grapefruit crop.

The U.S. lemon crop is forecast up 12 percent from 1991/92. Increased output from California and Arizona will put downward pressure on lemon prices in 1992/93. Florida's 1992/93 lime crop was damaged by Hurricane

Andrew and the crop forecast was reduced 16 percent. However, increased imports of Mexican limes dampened price hikes that occurred in early September.

Substantial World Production and Weaker U.S. Prices for Most Noncitrus Fruits

Favorable weather increased U.S. apple, pear, and grape crops in 1992, putting downward pressure on grower prices. The final forecast of the 1992 U.S. apple crop was 4 percent more than 1991 production. However, decreased peach production in the Eastern and Southern U.S. reduced the 1992 crop and raised monthly prices above the year earlier. Strawberry production is expected to be down 7 percent from the 1991 record.

Fresh-market apple and pear exports reached record highs in 1991/92, helping to boost grower prices. Larger world supplies in 1992/93 will likely reduce U.S. exports to the European Community, but exports to Mexico and other expanding markets are expected to increase due to higher incomes and reduced trade barriers.

Reduced Supply of U.S. Tree Nuts

The total U.S. tree-nut supply in 1992/93 is expected to be down 8 percent from last year and down 13 percent from the 1990/91 record. A moderate increase in almond production and the lowest carry-in stocks in 5 years have reduced the 1992/93 almond supply in the United States.

Smaller walnut and pecan crops and only moderately higher beginning stocks have lowered 1992/93 supplies. A record-large hazelnut crop is forecast, increasing the supply from last year. The larger 1992/93 pistachio crop will offset lower carry-in stocks, leaving supply above last year. Diminished supplies should maintain or strengthen grower prices in 1992/93 for most tree nuts. Per capita tree-nut consumption in 1992/93 will likely decline from the 1991/92 record high of 2.51 pounds.

NAFTA Improves Some Fruit Export Opportunities

A special article reviews provisions of the proposed North American Free Trade Agreement (NAFTA) that would phase out trade barriers for selected fruit commodities and change the terms of trade between the United States, Mexico, and Canada. Likely economic implications for U.S. fruit industries are also discussed. The article concludes that NAFTA will provide improved export opportunities to Mexico for U.S. peaches, pears, oranges, and apples. Mexico will likely increase orange juice exports to the United States under NAFTA.

Fresh Price Indexes Reflect Lower Citrus Prices

Citrus fruit prices, at both grower and retail levels, have been well below year-earlier prices for most of 1992. However, apple prices were record high until dampened by the new crop. Large 1992/93 crops are expected to provide ample fruit supplies and lower prices.

Orange Prices Dominate Changes in All-Fruit Grower Price Index

The all-fruit grower price index is heavily weighted by fresh-market orange prices. So, when fresh orange prices shot up following the December 1990 California freeze, the all-fruit index of prices received by growers rose dramatically to a new record in 1991. When 1991/92 California orange production recovered, the drop in prices brought the fruit price index down beginning in October 1991.

Orange prices have been so much lower in 1992 that the all-fruit grower price index dropped despite higher apple prices. Monthly indexes, from January through September 1992, averaged 30 percent below the same period in 1991. In October 1992, the fresh fruit price index was 57 percent of the year earlier. Grower prices for all oranges were down 14 percent in 1991/92, while fresh-market orange prices dropped 43 percent. However, the 1991/92 season-average price of all apples was up 20 percent from the prior season. In 1992/93, the season-average grower price for apples is expected to decline.

Table 1--U.S. monthly grower price indexes, 1990-92

| Month | All fruit index | | | Fresh fruit index | | |
|--------------|-----------------|------|------|-------------------|------|------|
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
| --1977=100-- | | | | | | |
| January | 181 | 200 | 207 | 191 | 210 | 217 |
| February | 177 | 206 | 210 | 185 | 218 | 221 |
| March | 185 | 217 | 204 | 195 | 231 | 214 |
| April | 187 | 220 | 211 | 199 | 235 | 223 |
| May | 196 | 236 | 203 | 209 | 254 | 213 |
| June | 201 | 364 | 194 | 212 | 410 | 198 |
| July | 192 | 346 | 153 | 202 | 387 | 150 |
| August | 168 | 342 | 162 | 173 | 384 | 160 |
| September | 181 | 387 | 159 | 189 | 438 | 156 |
| October | 189 | 272 | 154 | 198 | 297 | 150 |
| November | 199 | 217 | | 210 | 299 | |
| December | 194 | 208 | | 205 | 219 | |

Source: National Agricultural Statistics Service, USDA.

Figure 1
Fresh-Market Oranges: U.S. Grower Prices

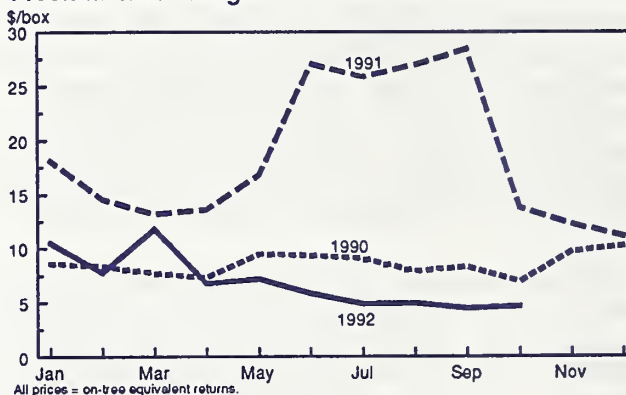


Figure 2
U.S. Producer Price Index for Fresh Fruit
% of 1982

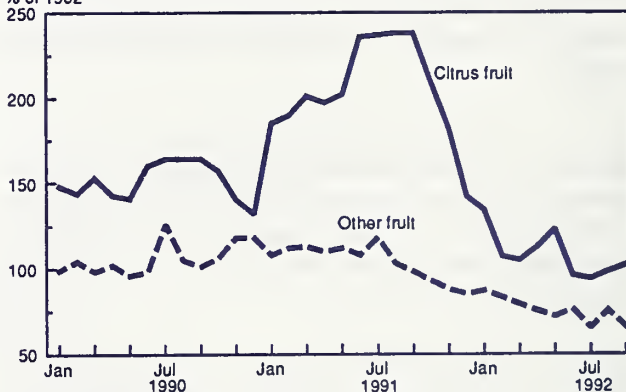
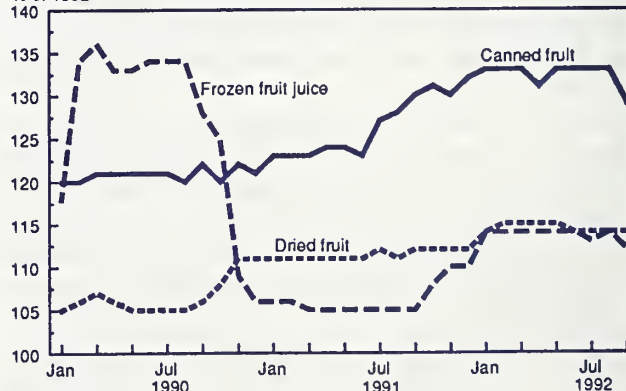


Figure 3
U.S. Producer Price Index for Processed Fruit
% of 1982



Retail Prices Reflect Grower Price Movements

Near-normal supplies of oranges in 1992 helped bring the Consumer Price Index (CPI) for fresh fruit down, despite higher apple prices. Retail prices for navel oranges were down 33 percent in 1992 (compared to the 2 months in 1991 when there were sufficient marketings to estimate a price) and Valencia orange prices averaged nearly 40 percent less.

Red Delicious apple prices continued upward in 1992, averaging 4 percent higher from January through September than a year earlier. Strong domestic and export demand for the high-quality 1991/92 apple crop supported prices in the face of increased supplies. After harvest of the 1992/93 crop began, average retail prices for Red Delicious apples moved down to below the year earlier in September and October.

In 1992, retail prices of citrus fruit (other than oranges) have been below a year earlier, while noncitrus prices have been mixed. Grapefruit prices averaged 5 percent less in January-September and lemon prices were down 15-20 percent from 1991. Pear, grape, and banana retail prices have been generally down in 1992, but prices were up for fresh strawberries and peaches.

The CPI for processed fruit has been higher in 1992 than in 1991, reflecting, in part, higher orange juice prices. Average retail orange juice prices dropped from a 1992-high of \$1.976 per pound (42-degree-Brix concentrate) in April to \$1.877 in September. However, the January-September 1992-average was 3 percent higher than for the same period in 1991. Florida had a smaller orange crop to process in 1992 and grower prices for processing oranges rose 4 percent. Apple juice, canned peaches and pears, and frozen strawberries also contributed to the overall rise in the processed-fruit price index.

Orange juice prices are expected to be relatively low in 1992/93 due to an increased world supply of orange juice. Production forecasts indicate ample supplies of citrus and noncitrus fruit in 1992/93 that will moderate retail prices for fresh and processed fruit.

Table 2--U.S. monthly consumer fresh fruit price indexes, 1990-92

| Month | Apples | | | Oranges 1/ | | |
|--------------|--------|------|------|------------|------|------|
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
| --1977=100-- | | | | | | |
| January | 130 | 158 | 173 | 149 | 206 | 188 |
| February | 137 | 162 | 177 | 159 | 224 | 179 |
| March | 140 | 164 | 177 | 159 | 235 | 172 |
| April | 139 | 166 | 183 | 154 | 246 | 166 |
| May | 140 | 173 | 190 | 158 | 244 | 178 |
| June | 147 | 183 | 196 | 172 | 271 | 189 |
| July | 157 | 190 | 200 | 172 | 286 | 179 |
| August | 168 | 193 | 202 | 170 | 299 | 181 |
| September | 165 | 190 | 186 | 168 | 317 | 181 |
| October | 148 | 162 | 154 | 156 | 272 | 179 |
| November | 147 | 164 | | 159 | 206 | |
| December | 152 | 170 | | 153 | 187 | |

1/ Includes tangerines.

Source: Bureau of Labor Statistics, Dept. of Labor.

Table 3--U.S. monthly consumer fruit price indexes, 1990-92

| Month | Fresh fruit | | | Processed fruit | | |
|------------------------|-------------|------|------------------------|-----------------|------|------|
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
| --1977=100-- | | | | | | |
| January | 171 | 190 | 189 | 125 | 135 | 136 |
| February | 170 | 191 | 183 | 132 | 133 | 139 |
| March | 171 | 196 | 189 | 137 | 132 | 139 |
| April | 176 | 202 | 187 | 138 | 132 | 140 |
| May | 175 | 205 | 190 | 139 | 132 | 140 |
| June | 173 | 204 | 183 | 140 | 131 | 138 |
| July | 177 | 199 | 173 | 140 | 131 | 138 |
| August | 170 | 187 | 181 | 140 | 131 | 138 |
| September | 169 | 194 | 189 | 140 | 131 | 138 |
| October | 163 | 185 | 182 | 140 | 131 | 136 |
| November | 165 | 184 | | 137 | 131 | |
| December | 171 | 189 | | 135 | 132 | |
| | | | | | | |
| Frozen fruit and juice | | | Canned and dried fruit | | | |
| --1977=100-- | | | | | | |
| January | 126 | 137 | 137 | 121 | 124 | 130 |
| February | 134 | 135 | 140 | 121 | 124 | 131 |
| March | 140 | 134 | 141 | 121 | 124 | 130 |
| April | 142 | 134 | 142 | 121 | 125 | 131 |
| May | 144 | 133 | 142 | 121 | 125 | 131 |
| June | 145 | 132 | 140 | 121 | 126 | 131 |
| July | 145 | 131 | 140 | 122 | 127 | 132 |
| August | 144 | 131 | 139 | 123 | 127 | 132 |
| September | 144 | 132 | 139 | 123 | 128 | 132 |
| October | 144 | 131 | 137 | 123 | 127 | 131 |
| November | 141 | 132 | | 122 | 128 | |
| December | 137 | 132 | | 123 | 129 | |

Source: Bureau of Labor Statistics, Dept. of Labor.

Table 4--U.S. monthly retail prices for selected fruits and juice, 1990-92

| Month | Valencia oranges | | | Navel oranges | | | Orange juice, concentrate 1/ | | | Grapefruit | | |
|-----------|-----------------------|-------|-------|--------------------------|-------|-------|------------------------------|-------|-------|-----------------------|-------|-------|
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
| | --Dollars per pound-- | | | --Dollars per pound-- | | | --Dollars per pound-- | | | --Dollars per pound-- | | |
| January | -- | -- | -- | 0.501 | 0.823 | 0.643 | 1.817 | 2.005 | 1.879 | 0.532 | 0.611 | 0.520 |
| February | -- | -- | -- | .580 | .930 | .616 | 1.980 | 1.971 | 1.963 | .579 | .595 | .513 |
| March | -- | -- | -- | .570 | -- | .563 | 2.150 | 1.902 | 1.922 | .626 | .603 | .524 |
| April | -- | -- | -- | .560 | -- | .537 | 2.214 | 1.909 | 1.976 | .690 | .615 | .552 |
| May | -- | 0.756 | -- | .578 | -- | .573 | 2.241 | 1.877 | 1.959 | .737 | .625 | .625 |
| June | -- | .871 | -- | .621 | -- | -- | 2.276 | 1.848 | 1.933 | .778 | .686 | .648 |
| July | 0.575 | .927 | 0.583 | -- | -- | -- | 2.289 | 1.807 | 1.929 | .828 | .695 | .671 |
| August | .571 | .983 | .568 | -- | -- | -- | 2.227 | 1.767 | 1.906 | .755 | .676 | .701 |
| September | .561 | 1.053 | .545 | -- | -- | -- | 2.262 | 1.756 | 1.877 | .664 | .662 | .731 |
| October | .524 | .959 | .541 | -- | -- | -- | 2.210 | 1.718 | 1.830 | .575 | .580 | .731 |
| November | -- | -- | -- | .585 | .731 | -- | 2.102 | 1.771 | -- | .551 | .544 | -- |
| December | -- | -- | -- | .563 | .652 | -- | 2.021 | 1.739 | -- | .564 | .529 | -- |
| | Lemons | | | Red delicious apples | | | Bananas | | | Peaches | | |
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
| | --Dollars per pound-- | | | --Dollars per pound-- | | | --Dollars per pound-- | | | --Dollars per pound-- | | |
| January | 0.925 | 1.133 | 1.056 | 0.601 | 0.810 | 0.876 | 0.429 | 0.438 | 0.428 | -- | -- | -- |
| February | .933 | 1.096 | 1.003 | .632 | .838 | .886 | .492 | .485 | .493 | 1.313 | 1.243 | 0.963 |
| March | 1.015 | 1.079 | .933 | .652 | .843 | .899 | .500 | .577 | .517 | 1.284 | 1.273 | -- |
| April | 1.127 | 1.183 | .921 | .650 | .860 | .913 | .481 | .547 | .484 | -- | -- | -- |
| May | 1.101 | 1.271 | .981 | .653 | .892 | .925 | .462 | .584 | .445 | -- | -- | -- |
| June | 1.103 | 1.296 | .988 | .697 | .936 | .962 | .447 | .532 | .463 | .811 | .999 | .933 |
| July | 1.179 | 1.338 | 1.024 | .750 | .956 | .990 | .529 | .516 | .432 | .895 | .786 | .781 |
| August | 1.155 | 1.294 | 1.009 | .832 | .964 | 1.015 | .463 | .416 | .509 | .924 | .693 | .851 |
| September | 1.158 | 1.288 | 1.144 | .877 | .974 | .933 | .465 | .432 | .459 | .940 | .788 | .945 |
| October | 1.145 | 1.322 | 1.110 | .765 | .846 | .765 | .432 | .395 | .442 | -- | -- | -- |
| November | 1.076 | 1.215 | -- | .741 | .839 | -- | .429 | .431 | -- | -- | -- | -- |
| December | .974 | 1.210 | -- | .772 | .864 | -- | .430 | .419 | -- | -- | -- | -- |
| | Anjou pears | | | Thompson seedless grapes | | | Strawberries 2/ | | | | | |
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | | | |
| | --Dollars per pound-- | | | --Dollars per pound-- | | | --Dollars per 12-oz. pint-- | | | | | |
| January | 0.675 | 0.739 | 0.830 | -- | 1.942 | 1.782 | -- | -- | -- | | | |
| February | .736 | .795 | .793 | 1.380 | 1.483 | 1.323 | 1.638 | 1.467 | 1.430 | | | |
| March | .757 | .812 | .855 | 1.144 | 1.432 | 1.302 | 1.338 | 1.268 | 1.173 | | | |
| April | .787 | .827 | .834 | 1.108 | 1.502 | 1.409 | 1.109 | 1.112 | .960 | | | |
| May | .783 | .849 | .839 | 1.455 | -- | -- | .781 | .976 | .831 | | | |
| June | .814 | .976 | .830 | 1.369 | -- | 1.370 | .987 | .924 | 1.048 | | | |
| July | -- | -- | -- | 1.238 | 1.376 | 1.017 | .965 | .948 | .988 | | | |
| August | -- | -- | -- | .993 | 1.073 | .928 | 1.081 | .961 | 1.185 | | | |
| September | -- | -- | -- | 1.064 | 1.019 | .992 | 1.210 | 1.014 | 1.473 | | | |
| October | -- | -- | -- | 1.266 | 1.110 | 1.162 | -- | 1.035 | 1.190 | | | |
| November | -- | -- | -- | 1.544 | 1.406 | -- | -- | -- | -- | | | |
| December | .789 | .881 | -- | -- | 1.653 | -- | -- | -- | -- | | | |

-- = Not applicable.

1/ Price of 12-ounce container.

2/ Dry pint.

Source: Bureau of Labor Statistics, U.S. Department of Labor.

Table 5--U.S. monthly producer price indexes, 1990-92

| Month | Grapefruit | | | Lemons | | | Navel oranges | | | Valencia oranges | | |
|--------------|------------|------|------|--------|------|------|---------------|------|------|------------------|------|------|
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
| --1982=100-- | | | | | | | | | | | | |
| January | 202 | 167 | 149 | 116 | 157 | 141 | 81 | 168 | 101 | 157 | 142 | -- |
| February | 188 | 171 | 149 | 119 | 154 | 136 | 81 | 179 | 71 | 152 | 141 | -- |
| March | 209 | 175 | 158 | 126 | 145 | 144 | 81 | 204 | 64 | 163 | 135 | 71 |
| April | 198 | 153 | 182 | 136 | 140 | 182 | 74 | 207 | 71 | 153 | 129 | 71 |
| May | 194 | 158 | 189 | 149 | 162 | 186 | 80 | -- | 87 | 141 | 135 | 76 |
| June | 251 | 236 | 189 | 149 | 175 | 193 | 100 | 207 | -- | -- | 185 | 46 |
| July | 270 | 244 | 189 | 159 | 184 | 204 | -- | -- | -- | -- | -- | 43 |
| August | -- | -- | 197 | 168 | 188 | 213 | -- | -- | -- | -- | -- | 44 |
| September | -- | -- | 222 | 165 | 193 | 208 | -- | -- | -- | -- | -- | 45 |
| October | 251 | 169 | 202 | 156 | 176 | 142 | -- | -- | 97 | 132 | 148 | 43 |
| November | 181 | 152 | | 115 | 128 | | -- | -- | | 122 | 96 | |
| December | 167 | 152 | | 113 | 155 | | 91 | 107 | | 120 | 121 | |

| Orange juice | | | Grapefruit juice | | | Lemonade | | | Grape juice | | |
|--------------|------|------|------------------|------|------|----------|------|------|-------------|------|------|
| 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |

--1982=100--

| | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| January | 138 | 114 | 135 | 151 | 140 | 159 | 136 | 147 | 147 | 103 | 114 | 119 |
| February | 162 | 114 | 135 | 160 | 138 | 187 | 140 | 147 | 147 | 108 | 114 | 119 |
| March | 163 | 112 | 135 | 159 | 133 | 193 | 140 | 147 | 147 | 108 | 112 | 118 |
| April | 160 | 112 | 134 | 160 | 130 | 197 | 140 | 147 | 147 | 105 | 114 | 118 |
| May | 160 | 111 | 126 | 160 | 126 | 203 | 135 | 144 | 147 | 109 | 123 | 119 |
| June | 160 | 111 | 119 | 161 | 125 | 203 | 137 | 144 | 147 | 109 | 123 | 124 |
| July | 160 | 111 | 116 | 161 | 126 | 203 | 137 | 144 | 147 | 105 | 123 | 124 |
| August | 161 | 107 | 115 | 156 | 125 | 203 | 137 | 144 | -- | 109 | 119 | 123 |
| September | 151 | 107 | 113 | 160 | 125 | 203 | 137 | 144 | 147 | 109 | -- | 125 |
| October | 147 | 115 | 107 | 158 | 129 | 203 | 142 | 144 | -- | 102 | 119 | -- |
| November | 121 | 127 | | 147 | 172 | | 142 | 154 | | 111 | 119 | |
| December | 118 | 132 | | 143 | 157 | | 142 | 146 | | 111 | 119 | |

| Delicious apples | | | McIntosh apples | | | Peaches | | | Pears | | |
|------------------|------|------|-----------------|------|------|---------|------|------|-------|------|------|
| 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |

--1982=100--

| | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| January | 90 | 126 | 138 | 113 | 97 | 112 | -- | -- | -- | 107 | 107 | 82 |
| February | 100 | 122 | 141 | 123 | 116 | 117 | -- | -- | -- | 111 | 110 | 113 |
| March | 98 | 120 | 134 | 119 | 108 | 118 | -- | -- | -- | -- | -- | 113 |
| April | 99 | 120 | 130 | 123 | 115 | 118 | -- | -- | -- | -- | -- | 111 |
| May | 97 | 140 | 130 | 117 | 119 | 114 | -- | -- | 138 | -- | -- | 113 |
| June | 98 | 144 | 132 | 120 | 119 | -- | -- | -- | 129 | -- | -- | 129 |
| July | -- | -- | 146 | -- | -- | -- | 185 | 109 | 71 | -- | -- | 112 |
| August | -- | -- | 174 | -- | -- | -- | 173 | 73 | 105 | 147 | 99 | 123 |
| September | -- | -- | 137 | -- | 123 | 100 | 196 | 91 | 88 | 84 | 96 | 94 |
| October | 97 | 140 | 112 | 115 | 115 | 81 | -- | -- | -- | 106 | 115 | 88 |
| November | 122 | 143 | | 104 | 115 | | -- | -- | | 109 | 106 | |
| December | 133 | 140 | | 97 | 105 | | -- | -- | | 103 | 91 | |

-- = Not applicable.

Source: Bureau of Labor Statistics, U.S. Department of Labor.

U.S. Citrus Crop Forecast Largest in 13 Years

Florida is expected to produce its third largest citrus crop in 1992/93 due to favorable weather and an expanded number of bearing acres and trees. The California citrus production forecast is up 4 percent.

U.S. citrus fruit production is forecast up 23 percent in 1992/93 due to expanded production in Florida, California, and Texas. If realized, the 1992/93 crop would be the largest since 1979/80 when the U.S. produced a record 16.5 million short tons.

Citrus production was hampered by eight freezes during the 1980's (seven in Florida and one in California) that reduced seasonal production and damaged trees. Total U.S. citrus production reached a 20-year low of 10.5 million tons in 1984/85, compared to 1992/93's forecast of 15.2 million tons.

Good Weather and More Trees Increase Florida Citrus Prospects

Florida's citrus production is expected to be up 31 percent from 1991/92, to 11.1 million tons. If realized, the 1992/93 Florida citrus crop would be the third largest ever recorded, exceeded only by 12.4 million tons in 1979/80 and 11.2 million tons in 1976/77.

Weather conditions in Florida were nearly ideal for citrus crops this season. A cool winter induced a good bloom and the winter was long enough to prevent very early bloom, resulting in a uniform bloom. Above-average moisture through spring and summer in some areas and at-least-normal moisture in others contributed to Florida's large crop. Total fruit count is up almost 56 percent from 1991/92, but fruit loss from drop is expected to be more than last season because of the large crop and extended harvest period. Fruit sizes were well below normal, as expected with the very heavy fruit set.

Seven freezes occurred during the 1980's in Florida and citrus production was a low 6.8 million tons in 1989/90. Bearing acreage dropped by one-third between 1979/80 and 1985/86. Despite two more freezes, bearing acreage had increased nearly 15 percent by 1991/92. According to the January 1992 tree inventory, Florida had 585,651 acres of bearing-age citrus trees, a 5-percent gain from the 1990 inventory. Due to higher density planting, the number of citrus trees increased more than acreage, to a record 92 million, nearly 17 percent above the 1990 inventory. Florida's citrus output has the potential to increase markedly in the future because 31 percent of the trees reported in the inventory were nonbearing (planted after 1988) and will reach peak production in 13-18 years.

Texas and California Recover From Freezes

Two December freezes that damaged Florida citrus, in 1983 and 1989, almost destroyed the Texas citrus industry. In Texas, the December 1989 freeze killed or heavily damaged so many trees that the State reported no commercial production in 1990/91 and very little in 1991/92. The 1992/93 Texas citrus crop is expected to be 67,000 tons, 25 percent of prefreeze production.

In December 1990, California had its worst freeze in memory and 1990/91 citrus output dropped to half of the 1989/90 level. However, California citrus production rebounded in 1991/92. California's 1992/93 citrus crop is likely to be 3 percent larger than 1991/92 and match pre-freeze output.

Orange Crop To Be Largest Since 1979/80

A large Florida crop is expected to boost U.S. orange production 24 percent from 1991/92. Florida's orange crop is forecast to be the largest since 1979/80 (9.3 million tons) and up 33 percent from 1991/92. More Florida oranges may be shipped for fresh use between October and January due to a 37-percent increase in early and midseason varieties (including navels). However, fruit sizes are smaller than average and maturity is behind last season. More than 90 percent of Florida's oranges are usually processed. Projected production of later-maturing Valencia oranges is up 28 percent from 1991/92. The larger Florida orange crop will boost U.S. orange juice production in 1992/93.

California normally provides about 80 percent of U.S. fresh-market oranges, with less than half of its Valencia production and just 25 percent of its navel production being processed. Ample supplies of fresh oranges are anticipated on the basis of an 8-percent larger California navel crop, although Valencia production is expected to be down 3 percent. Overall, 1992/93 California orange output will be up slightly from 1991/92.

U.S. Grapefruit Production To Increase in 1992/93

Florida's 1992/93 grapefruit crop is forecast to be 27 percent larger than the prior crop due to an increase in the number of bearing-age trees and favorable weather. In recent nonfreeze years, Florida accounted for 80-85 per-

cent of U.S. grapefruit production and California for nearly 15 percent.

Grapefruit production in California's Desert Valley area is expected to be unchanged from prior years in 1992/93, while Arizona's grapefruit crop is projected down 21 percent. Forecasts for California's "other areas" will be released in April 1993. Texas is still recovering from the 1989 freeze and, while grapefruit output is expected to increase in 1992/93, the forecast is only 30 percent of prefreeze production.

Smaller Tangerine and Lime Crops Expected

The 1992/93 U.S. tangerine crop is expected to be 2 percent smaller than the prior season. A 20-percent drop in Arizona production is nearly offset by a 4-percent larger California crop. Florida's tangerine forecast is about the

same as 1991/92 production, and nearly half of the U.S. crop. Tangerine production has the potential to increase markedly in the future. According to the 1992 citrus tree inventory, Florida had 1.4 million bearing-age tangerine trees and 1 million trees planted since 1988 that will begin to bear fruit in 1-3 years.

Harvest of Florida's 1992/93 lime crop was well underway when Hurricane Andrew damaged much of the remaining mature fruit and uprooted trees. Approximately 2,000 acres of lime trees remain in Dade County, compared to 6,500 before the storm. However, some of the remaining trees have blossomed and are expected to produce fruit before the end of the 1992/93 season in March. While most Florida lime production was in the hurricane's path, groves north of the destruction were not damaged and have provided very limited lime supplies. Production estimates for 1992/93 dropped 16 percent after the hurricane.

Table 6--U.S. citrus fruit production, 1990/91-1992/93 1/

| Crop and State | Utilized | | | Utilized | | |
|-------------------|--------------------|---------|----------------------|----------------------|---------|----------------------|
| | 1990/91 | 1991/92 | Indicated 1992/93 | 1990/91 | 1991/92 | Indicated 1992/93 |
| | --1,000 boxes 2/-- | | | --1,000 short tons-- | | |
| All oranges | 178,950 | 208,310 | 256,350 | 7,848 | 8,861 | 11,010 |
| Arizona | 1,750 | 2,380 | 1,900 | 65 | 89 | 71 |
| California | 25,600 | 66,100 | 68,000 | 961 | 2,480 | 2,550 |
| Florida | 151,600 | 139,800 | 186,000 | 6,822 | 6,291 | 8,370 |
| Texas | 3/ | 30 | 450 | 3/ | 1 | 19 |
| All grapefruit | 55,500 | 55,265 | 4/ | 2,256 | 2,224 | 2,714 |
| Arizona | 2,400 | 2,800 | 2,200 | 77 | 89 | 70 |
| California | 8,000 | 10,000 | 4/ | 262 | 329 | 4/ |
| Florida | 45,100 | 42,400 | 54,000 | 1,917 | 1,803 | 2,296 |
| Texas | 3/ | 65 | 1,200 | 3/ | 3 | 48 |
| All lemons | 18,900 | 20,200 | 22,700 | 719 | 768 | 863 |
| Arizona | 4,100 | 5,100 | 5,700 | 156 | 194 | 217 |
| California | 14,800 | 15,100 | 17,000 | 563 | 574 | 646 |
| Limes: | | | | | | |
| Florida | 1,450 | 1,600 | 1,250 | 64 | 70 | 55 |
| Tangelos: | | | | | | |
| Florida | 2,650 | 2,600 | 3,300 | 119 | 117 | 149 |
| All tangerines | 3,900 | 6,200 | 6,050 | 166 | 258 | 254 |
| Arizona | 600 | 1,200 | 950 | 23 | 45 | 36 |
| California | 1,350 | 2,400 | 2,500 | 51 | 90 | 94 |
| Florida | 1,950 | 2,600 | 2,600 | 92 | 123 | 124 |
| Temples: | | | | | | |
| Florida | 2,500 | 2,350 | 2,700 | 113 | 106 | 122 |
| U.S. total citrus | | | | 11,285 | 12,404 | 15,167 |

1/ The crop year begins with bloom of the first year shown and ends with harvest.

2/ Net pounds per box: oranges-California and Arizona-75; Florida-90; Texas-85; grapefruit-California desert and Arizona-64; California other areas-67; Florida-85; Texas-80; lemons-76; limes-88; tangerines-California and Arizona-75; Florida-95; tangelos and temples-90.

3/ Due to the severe freeze of December 1989, Texas had no commercial production for the 1990/91 season.

4/ The first forecast for California grapefruit "other areas" will be available April 1, 1993, total based on average California production.

Source: National Agricultural Statistics Service, USDA.

Larger Orange Crops in Florida and Brazil Will Boost World Orange Juice Supply

World orange juice production will rise significantly this season as Florida's orange crop is forecast up 33 percent and in Brazil, Sao Paulo's orange crop is forecast up 10 percent. Larger supplies will move prices of processing oranges and orange juice lower.

The United States and Brazil are the largest producers of orange juice in the world. However, Brazil represents about 80 percent of world orange juice exports, while the United States imports a large share of domestic orange juice consumption. Because the United States is a large net importer of orange juice, production in both the United States and Brazil are dominant factors in the world orange juice market.

Typically more than 90 percent of Florida's orange crop is processed into orange juice. Therefore, USDA's first forecast for 1992/93 Florida orange production (186 million boxes, up from 140 million last season) portends sharply increased orange juice production in Florida this season.

The increase in U.S. orange juice production will be softened somewhat by projected lower yields of 1.48 gallons (42 degrees Brix) per box, compared to 1.55 gallons last season. If production and yield forecasts are realized, the Florida Department of Citrus projects orange juice production will increase from 811 million gallons (single-strength equivalent) in 1991/92 to about 1,062 million gallons this season, a jump of 31 percent.

Orange production in Sao Paulo, Brazil, is expected to be 275 million boxes, 15-million-boxes above the July USDA forecast. If the 275 million box crop is realized, it would be 10 percent more than the 1991 crop. Although Sao

Paulo's production will not reach the 295 million boxes produced in 1989, this year's increase is the second consecutive increase since drought adversely affected the 1990 crop.

Sao Paulo accounts for 84 percent of orange production in Brazil, the world's leading orange producer. Almost 90 percent of the Sao Paulo orange crop is processed into juice, nearly all of which is exported. Europe and the United States are Brazil's major export markets. Total orange juice production in Brazil is expected to be up about 8 percent as juice yields decline from last year's unusually high yield.

Figure 4

Florida Oranges: Production, Use, and Price

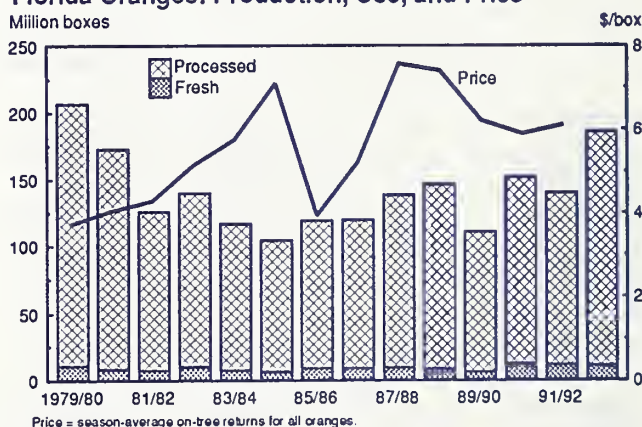


Table 7--Estimated utilization of round oranges, Florida, 1986/87-1992/93 1/

| Item | 1986/87 | 1987/88 | 1988/89 | 1989/90 | 1990/91 | 1991/92 | Forecast 1992/93 |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------|
| --Million boxes 90-lb-- | | | | | | | |
| Fresh | 8.5 | 8.9 | 7.7 | 5.2 | 11.4 | 10.3 | 11.0 |
| Frozen concentrate | 90.5 | 103.9 | 107.4 | 70.1 | 100.4 | 90.7 | 130.4 |
| Chilled juice | 19.2 | 23.6 | 29.5 | 33.4 | 38.1 | 37.1 | 42.7 |
| Canned juice | 0.9 | 0.8 | 1.1 | 0.6 | 0.6 | 0.5 | 0.6 |
| Blends | 0.1 | 0.1 | 2/ | 2/ | 2/ | 2/ | 2/ |
| Non-certified | 0.5 | 0.7 | 0.9 | 0.8 | 1.0 | 1.4 | 1.3 |
| Total | 119.7 | 138.0 | 146.6 | 110.2 | 151.5 | 139.8 | 186.0 |

1/ The total used in processed products does not agree exactly with the utilization reported by the Florida Citrus Processors Association because their orange utilization report includes some specialty fruit.

2/ Less than 50,000 boxes.

Source: Florida Department of Citrus.

Orange Juice Prices Decline Due to Larger Crop Prospects

Orange juice futures prices for near-term contracts rose sharply, reaching over \$1.70 per pound solids immediately following the October 1991 Florida crop forecast that was much smaller than expected. Since then, larger orange crop prospects in Brazil and the United States moved prices downward to less than \$0.95 per pound solids in mid-November 1992, the lowest in 5 years. Orange juice prices and grower returns for processed oranges are expected to be relatively low this season, barring adverse weather in Florida this winter.

Imports Expected To Decline in 1992/93

Orange juice imports represent a residual supply in the U.S. market. The December 1989 Florida freeze that sharply reduced U.S. orange juice production resulted in

a sharp rise of U.S. imports. In the 1989/90 season, imports were 492.1 million gallons (single-strength equivalent), or over 46 percent of U.S. consumption. With the quick recovery of the Florida orange crop the following 1990/91 season, U.S. orange juice imports fell more than 30 percent to 327.2 million gallons, or only 28 percent of domestic consumption. The larger Florida orange crop and resulting increase in orange juice production in 1992/93 likely will further reduce U.S. import demand for orange juice. U.S. orange juice consumption has been stagnant over the past decade, due in large part to relatively high prices resulting from a series of freezes in Florida.

Historically, Brazil has accounted for about 85 percent of total U.S. imports. As production in the United States and Brazil expands, Brazil will increasingly have to look to Europe, one of its major markets, and to other developing markets as an outlet for its juice.

Figure 5
Near-Term Futures Contract Prices for Orange Juice

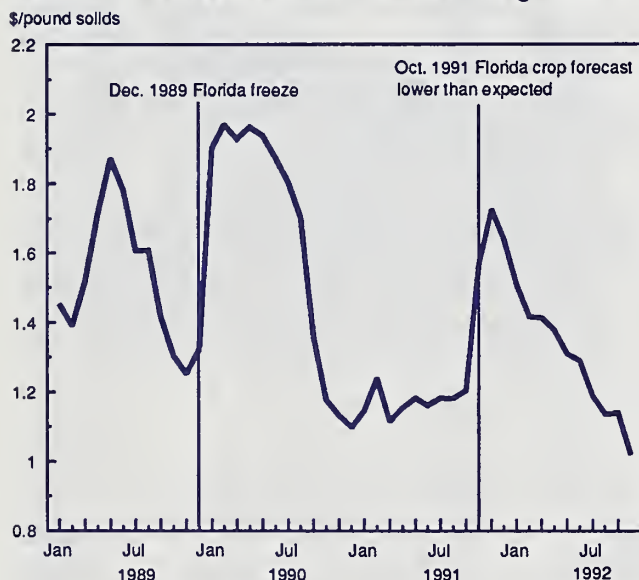


Figure 6
Orange juice: U.S. Production and Imports

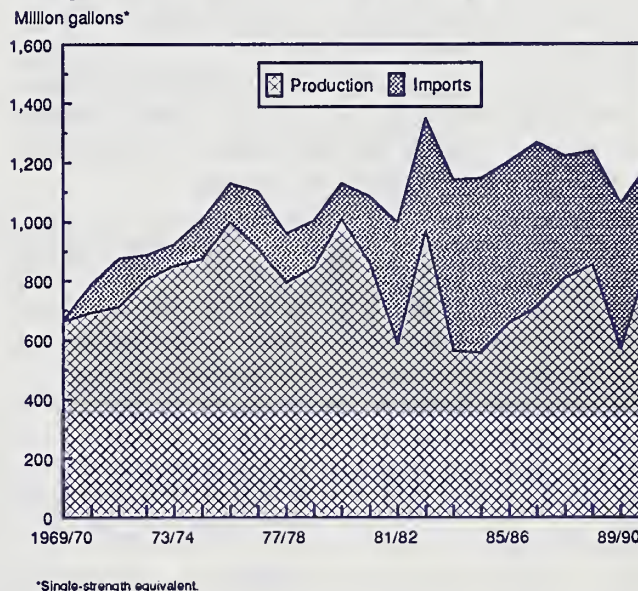


Table 8--Oranges: Average monthly equivalent on-tree prices received by growers, Florida, 1990-92

| Month | Fresh oranges | | | Processing oranges | | | All oranges | | |
|---------------------------|---------------|-------|-------|--------------------|------|------|-------------|------|------|
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
| --Dollars per 90-lb box-- | | | | | | | | | |
| January | 13.93 | 11.00 | 6.90 | 5.70 | 5.30 | 5.70 | 5.82 | 5.51 | 5.74 |
| February | 13.89 | 8.71 | 7.18 | 5.50 | 5.52 | 6.17 | 5.69 | 5.93 | 6.28 |
| March | 13.15 | 8.40 | 6.10 | 6.00 | 6.27 | 6.25 | 6.26 | 6.45 | 6.24 |
| April | 13.45 | 8.40 | 6.10 | 7.15 | 6.48 | 7.05 | 7.31 | 6.63 | 7.00 |
| May | 15.65 | 9.10 | 7.10 | 6.95 | 6.50 | 7.55 | 7.10 | 6.76 | 7.53 |
| June | -- | -- | 10.60 | -- | -- | 8.60 | -- | -- | 8.77 |
| July | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| August | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| September | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| October | 7.10 | 11.60 | -- | 5.40 | 3.30 | -- | 5.70 | 8.23 | -- |
| November | 6.70 | 9.40 | -- | 5.11 | 3.99 | -- | 5.23 | 4.90 | -- |
| December | 8.80 | 8.70 | -- | 4.96 | 4.80 | -- | 5.27 | 5.09 | -- |

Source: National Agricultural Statistics Service, USDA.

Fresh Orange Supplies Projected To Increase in 1992/93

The California navel orange crop is forecast to be 8 percent larger than in 1991/92, while Valencia output is expected to dip 3 percent. Prices of fresh-market oranges remain lower than in 1991.

California 1992/93 orange output will be up 3 percent from the 1990/91 season (November-October), but the crop is projected to be smaller than the record-high 1989/90 crop. USDA's first forecast placed California orange production at 2.550 million short tons. California's 1989/90 orange crop was 2.677 million tons, 5 percent more than the 1992/93 forecast.

Fresh Orange Supply To Rise in 1992/93

California's 1992/93 navel orange crop is expected to be 8 percent larger than in 1991/92 and the industry expects the season to be earlier than last year, when harvest got off to a late start. The California navel orange marketing season begins in November, but last year shipments were behind normal until January. Growers report a large set and fruit size somewhat larger than last year. California navel oranges are grown for the fresh market, with only about 25 percent typically processed. The production increase will provide ample supplies of fresh-market oranges for domestic and export markets.

USDA's first forecast of 1992/93 California Valencia production was down 3 percent from the near-record 1991/92 crop. California's Valencia orange forecast is subject to more revision than forecasts for early-season oranges and tangerines because Valencia marketings do not begin until March, 6 months after the first forecast.

California orange production made an excellent recovery from the December 1990 freeze. USDA's October estimate placed California 1991/92 all-orange production up 158 percent from the freeze-damaged 1990/91 crop. Navel orange output more than doubled, and California's 1991/92 Valencia orange crop is expected to be three times the 1990/91 crop -- the second largest on record.

Figure 7

California Oranges: Production, Use, and Price

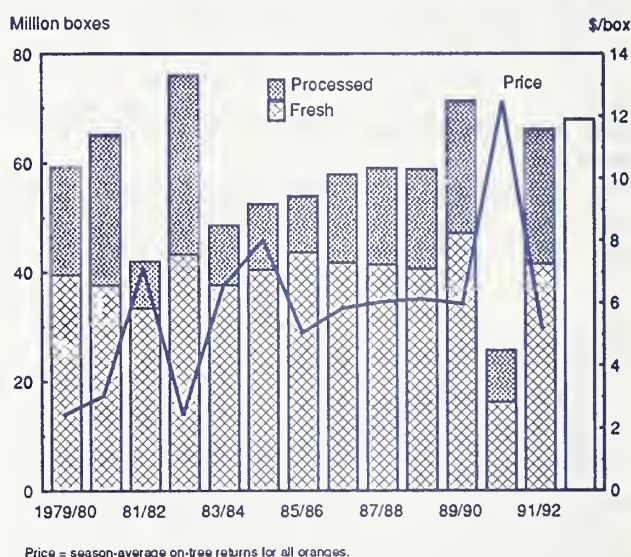


Table 9--U.S. orange production, 1990/91-1992/93 1/

| Crop and State | Utilized | | | Utilized | | |
|-------------------------------------|--------------------|---------|----------------------|----------------------|---------|----------------------|
| | 1990/91 | 1991/92 | Indicated 1992/93 | 1990/91 | 1991/92 | Indicated 1992/93 |
| | --1,000 boxes 2/-- | | | --1,000 short tons-- | | |
| Early, midseason, and navels 3/: | 103,850 | 119,300 | 153,100 | 4,550 | 5,100 | 6,598 |
| Arizona | 550 | 780 | 700 | 20 | 29 | 26 |
| California | 15,800 | 35,100 | 38,000 | 593 | 1,317 | 1,425 |
| Florida | 87,500 | 83,400 | 114,000 | 3,937 | 3,753 | 5,130 |
| Texas | 4/ | 20 | 400 | 4/ | 1 | 17 |
| Valencias: | 75,100 | 89,010 | 103,250 | 3,298 | 3,761 | 4,412 |
| Arizona | 1,200 | 1,600 | 1,200 | 45 | 60 | 45 |
| California | 9,800 | 31,000 | 30,000 | 368 | 1,163 | 1,125 |
| Florida | 64,100 | 56,400 | 72,000 | 2,885 | 2,538 | 3,240 |
| Texas | 4/ | 10 | 50 | 4/ | 5/ | 2 |

1/ The crop year begins with bloom of the first year shown and ends with harvest.

2/ Net pounds per box: oranges-California and Arizona-75; Florida-90; and Texas-85.

3/ Navel and miscellaneous varieties in California and Arizona. Early and midseason varieties in Florida and Texas, including small quantities of tangerines in Texas.

4/ Due to the severe freeze of December 1989, Texas had no commercial production for the 1990/91 season.

5/ Texas estimates at 425 tons.

Source: National Agricultural Statistics Service, USDA.

Fresh Orange Prices Down

With California's recovery from the December 1990 freeze, the 1991/92 U.S. season-average price (on-tree equivalent) for fresh-market oranges dropped 43 percent from 1990/91, returning to the prefreeze level of 1989/90. California orange shipments started slowly in November 1991, so grower prices for fresh oranges did not drop below the year-earlier level until January 1992. Since May 1992, grower prices for fresh oranges have been lower than in corresponding months of the 4 prior years.

California provides nearly 80 percent of fresh-market oranges in the United States and imports are typically less than 1 percent. Although orange imports increased in 1990/91 after the December 1990 freeze, the shortage of California oranges drove up retail prices. Navel orange prices were up to 93 cents a pound by February 1991, when marketings of the short 1990/91 crop were essentially complete. A normal 1991/92 navel crop brought retail prices down to an average of 59 cents from January through June 1992. Retail prices for Valencia oranges were 57-58 cents a pound in July and August 1992, compared to 93-98 cents in 1991. Ample supplies of oranges will continue to keep retail prices down.

Orange Export Shipments Pick Up

The United States exported 470,460 short tons of oranges between November 1991 and July 1992, compared to

229,710 in the same period the year before when the California freeze curtailed shipments. In the previous five entire seasons, orange exports averaged 539,300 tons, 25 percent of U.S. fresh utilization. Total exports of the 1991/92 crop are likely to be near normal. Japan and Canada are the most important export markets for U.S. oranges, each accounting for about one-third of U.S. exports.

In contrast, U.S. fresh orange imports averaged less than 2 percent of U.S. consumption (in the five seasons before 1990/91) and are expected to fall back given large domestic production prospects and lower prices. Orange imports totaled 12,990 tons from November 1991 through July 1992, compared to 66,326 tons during the same months in 1990/91 when California oranges were in short supply following the freeze.

Spain is the major orange-exporting country in the world and supplies mainly the European market. However, in 1990/91, U.S. imports from Spain increased, accounting for 20 percent of the total, while Mexico supplied 40 percent of imports. So far in 1991/92, nearly 40 percent of U.S. imports were from Morocco and 20 percent from Mexico. Mexico will continue to be the major supplier of oranges when U.S. production falls short.

Table 10--Oranges: Average monthly equivalent on-tree prices received by growers, California, 1990-92

| Month | Fresh oranges | | | Processing oranges | | | All oranges | | |
|---------------------------|---------------|-------|-------|--------------------|-------|-------|-------------|-------|------|
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
| --Dollars per 75-lb box-- | | | | | | | | | |
| January | 7.87 | 23.80 | 11.58 | 1.18 | -0.89 | 0.08 | 6.70 | 6.09 | 9.54 |
| February | 7.77 | 27.23 | 7.98 | 1.90 | -0.89 | 0.08 | 6.27 | 7.74 | 6.34 |
| March | 7.21 | 25.95 | 13.01 | 2.16 | -1.00 | -0.10 | 5.56 | 14.13 | 9.74 |
| April | 6.94 | 30.28 | 7.12 | 2.16 | -1.44 | -0.51 | 5.20 | 19.45 | 4.62 |
| May | 9.39 | 27.68 | 7.47 | 2.40 | -1.08 | -0.59 | 6.87 | 20.08 | 4.43 |
| June | 9.43 | 27.08 | 5.69 | 2.42 | -1.08 | -0.46 | 6.67 | 19.51 | 3.06 |
| July | 9.08 | 25.88 | 4.94 | 1.98 | -1.08 | -0.48 | 5.75 | 17.40 | 2.09 |
| August | 7.88 | 26.98 | 4.94 | 0.78 | -1.28 | -0.48 | 4.38 | 18.45 | 1.65 |
| September | 8.28 | 28.48 | 4.44 | 0.58 | -1.28 | -0.68 | 4.48 | 21.10 | 1.29 |
| October | 6.89 | 26.68 | 4.64 | 0.54 | -1.08 | -0.68 | 3.92 | 20.39 | 1.79 |
| November | 11.60 | 16.78 | | -0.85 | -0.48 | | 9.59 | 14.25 | |
| December | 11.20 | 12.98 | | -0.89 | -0.30 | | 9.12 | 11.04 | |

Source: National Agricultural Statistics Service, USDA.

Florida's 1992/93 Grapefruit Crop Up 27 Percent

Near-record production of Florida grapefruit is expected to boost U.S. production in 1992/93. Fresh-use prices were lower in 1991/92 with the large California crop, while Florida processing prices improved.

The combination of a large Florida crop forecast and the likely prospect of an average California crop would bring U.S. grapefruit production up 22 percent in 1992/93, to 2.714 million short tons. In recent nonfreeze years, Florida accounted for 80-85 percent of U.S. grapefruit production, California for 10-15 percent, and Arizona for 5 percent or less.

USDA's first forecast of Florida all-grapefruit production is 2.296 million tons, up 27 percent from 1991/92. If the forecast is realized, Florida's 1992/93 grapefruit crop would be the third largest on record and just 1-2 percent less than the 1979/80 and 1988/89 crops.

Grapefruit production in California's "Desert Valley" area is expected to be the same in 1992/93 as the prior four seasons. Forecasts of production in California's "other" areas will be released in April 1993, near the beginning of the marketing season. In 1991/92, production in other areas was 217,000 tons, compared to a three-season average of 189,000 tons. Arizona's grapefruit crop forecast is 21 percent less than the 1991/92 crop. Texas, recovering from the devastating freeze of December 1989, is expected to produce 48,000 tons of grapefruit in the 1992/93 season, just 25 percent of prefreeze production.

Florida Seedless Grapefruit Crop Forecast Up 26 Percent From 1991/92

The first forecast of 1992/93 Florida seedless grapefruit (white and colored) production is 1 percent more than the record of 2.184 million tons in 1988/89. Production of colored (red and pink) seedless varieties is projected up 22 percent and white seedless grapefruit up 31 percent from 1991/92.

Florida's grapefruit trees have minimal late-bloom fruit and a heavy fruit set, but fruit size is below average. The average number of seedless grapefruit per tree is up 43 percent from last year. White grapefruit are expected to be 13 percent smaller and colored nearly 18 percent smaller than in 1990/91. The fruit count was lower in 1990/91, but the average fruit size was larger than in the two prior seasons.

Florida's output of seedless grapefruit has been on an increasing trend, while the seedy varieties (mainly Duncan) have declined. Seedy grapefruit were 14 percent of Florida's record 1979/80 crop, 6 percent in 1988/89, and 4 percent of the 1992/93 crop forecast. Colored (red and pink) seedless grapefruit varieties increased from 29 per-

Table 11--U.S. grapefruit production, 1990/91-1992/93 1/

| Crop and State | Utilized | | | Utilized | | |
|----------------|--------------------|---------|----------------------|----------------------|---------|----------------------|
| | 1990/91 | 1991/92 | Indicated 1992/93 | 1990/91 | 1991/92 | Indicated 1992/93 |
| | --1,000 boxes 2/-- | | | --1,000 short tons-- | | |
| Florida | 45,100 | 42,400 | 54,000 | 1,917 | 1,803 | 2,296 |
| Seedless | 43,500 | 41,200 | 52,000 | 1,849 | 1,752 | 2,211 |
| Colored | 21,800 | 22,100 | 27,000 | 927 | 940 | 1,148 |
| White | 21,700 | 19,100 | 25,000 | 922 | 812 | 1,063 |
| Other | 1,600 | 1,200 | 2,000 | 68 | 51 | 85 |
| Arizona | 2,400 | 2,800 | 2,200 | 77 | 89 | 70 |
| California | 8,000 | 10,000 | 3/ | 262 | 329 | 3/ |
| Desert Valley | 3,500 | 3,500 | 3,500 | 112 | 112 | 112 |
| Other areas | 4,500 | 6,500 | 3/ | 150 | 217 | 3/ |
| Texas | 4/ | 65 | 1,200 | 4/ | 3 | 48 |

1/ The crop year begins with bloom of the first year shown and ends with harvest.

2/ Net pounds per box: California desert and Arizona-64; California other areas-67; Florida-85; and Texas-80.

3/ The first forecast for California grapefruit "other areas" will be available April 1993.

4/ Due to the severe freeze of December 1989, Texas had no commercial production for the 1990/91 season.

Source: National Agricultural Statistics Service, USDA.

cent of production in 1988/89 to 50 percent in 1992/93, while white seedless varieties declined from 57 percent in 1988/89 to 46 percent of the 1992/93 forecast. U.S. consumers prefer colored seedless grapefruit, while Japanese and Europeans prefer white.

According to the 1992 Florida citrus tree inventory, the number of grapefruit trees increased 17 percent from the 1990 inventory. Colored varieties gained 32 percent and white 12 percent. Florida grapefruit production has growth potential because 3.6 million (27 percent) of the 13.1 million trees inventoried were set since 1988 and will begin to bear fruit in 1-3 years.

Florida Grapefruit Prices Mixed

Florida fresh grapefruit prices (equivalent on-tree returns) averaged \$8.69 a box (85 pounds) during the 1991/92 season (September-August), slightly below the 1990/91 average of \$8.83 a box. Large California and Arizona crops brought prices down sharply. California grower prices for fresh grapefruit averaged \$6.85 a box (64-67 pounds) during the 1991/92 season, down 13 percent from 1990/91. The 1991/92 season-average grower price in Arizona was down 21 percent, from \$7.45 in 1990/91 to \$5.85 a box (67 pounds).

Less Florida grapefruit juice production in 1991/92 and reduced inventories put upward pressure on grower prices. Florida citrus processors reported, as of October 3, 1992, the pack of frozen concentrate grapefruit juice was down 7 percent from a year ago, movement was down 4 percent, and product-on-hand was 16 percent less than carry-in. Low grapefruit juice stocks pushed prices higher for Florida processing grapefruit in 1991/92. On-tree grower prices for processing grapefruit averaged \$4.25 a box,

Table 12--Estimated utilization of Florida grapefruit, 1989/90-1992/93

| | | | | Forecast |
|---------------------------|---------|---------|---------|----------|
| Item | 1989/90 | 1990/91 | 1991/92 | 1992/93 |
| -- Million 85-lb boxes -- | | | | |
| Fresh | 12.9 | 23.2 | 21.9 | 26.0 |
| Canned | 1.0 | 0.8 | 0.6 | 0.6 |
| Frozen concentrate | 19.4 | 17.4 | 16.1 | 22.9 |
| Chilled juice | 1.2 | 2.1 | 2.4 | 2.9 |
| Blends | 0.7 | 0.8 | 0.4 | 0.6 |
| Non-certified | 0.5 | 0.7 | 1.0 | 1.0 |
| Total | 35.7 | 45.0 | 42.4 | 54.0 |

Source: Florida Department of Citrus.

more than double the 1990/91 season-average price of \$2.08, and nearly 40 percent higher than in 1989/90.

Despite 6 percent lower utilized production of 1991/92 Florida grapefruit, fresh-use declined less than 6 percent and was about the same share of the crop, 52 percent, as in 1990/91. However, processed use (mainly seedy and white seedless varieties) was the lowest in 10 years and down 6 percent from 1990/91. Most processed grapefruit is still used for frozen concentrate, 78 percent in 1991/92, but the share declined from 83 percent in 1986/87. With more consumer demand for not-from-concentrate juice, chilled use has increased from 4 percent of processed grapefruit in 1986/87 to 12 percent in 1991/92.

Grapefruit Exports Keep Pace

The United States is the major grapefruit producing and exporting country. Exports account for nearly 30 percent of U.S. grapefruit for fresh use. Despite a 6 percent smaller 1991/92 crop, grapefruit exports from September 1991 through July 1992 were only 1 percent behind the relatively large quantity exported during the same period in 1990/91.

U.S. exports of frozen concentrate grapefruit juice (FCGJ) were up 74 percent from the year earlier during the first 8 months of the 1991/92 processing season (December 1991 through July 1992). With 4 months left in the 1991/92 season, FCGJ exports were more than 11 million gallons (single-strength equivalent), compared to total 1990/91 exports of 10.3 million gallons. More than half of U.S. grapefruit exports (fresh and juice) in 1991/92 were to Japan. The 12 European Community countries accounted for 24-25 percent and Canada for 15-16 percent of U.S. grapefruit exports (fresh and juice).

Figure 8
U.S. Grapefruit Production, Use, and Price

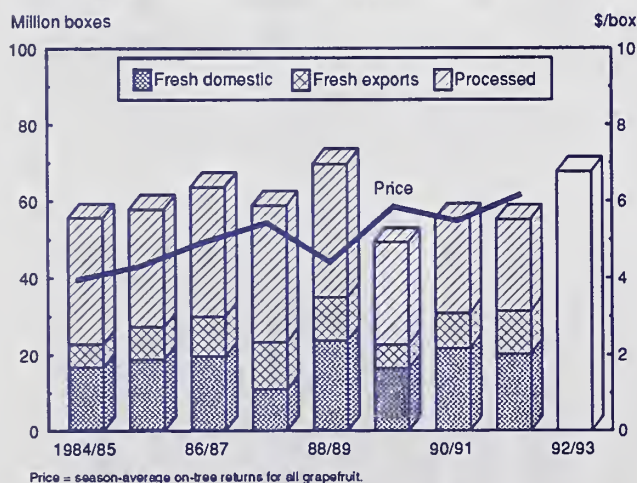


Table 13--Grapefruit: Average monthly equivalent on-tree prices received by growers, Florida, 1990-92

| Month | Fresh grapefruit | | | Processing grapefruit | | | All grapefruit | | |
|---------------------------|------------------|-------|-------|-----------------------|-------|------|----------------|------|------|
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
| --Dollars per 85-lb box-- | | | | | | | | | |
| January | 10.98 | 9.10 | 7.96 | 2.89 | 2.17 | 4.28 | 4.87 | 5.71 | 6.08 |
| February | 12.19 | 8.75 | 9.04 | 3.12 | 2.33 | 4.89 | 4.84 | 4.73 | 6.45 |
| March | 13.42 | 9.82 | 9.92 | 3.85 | 2.15 | 5.11 | 8.57 | 5.72 | 7.47 |
| April | 9.77 | 9.62 | 10.07 | 4.50 | 1.57 | 5.17 | 6.04 | 5.88 | 8.24 |
| May | -- | 7.73 | -- | -- | 1.36 | -- | -- | 4.72 | -- |
| June | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| July | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| August | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| September | 8.97 | 10.15 | -- | 1.29 | -0.40 | -- | 7.69 | 8.90 | -- |
| October | 8.97 | 7.99 | 8.17 | 1.92 | 0.12 | 0.93 | 7.17 | 6.19 | 7.14 |
| November | 8.36 | 8.10 | | 2.05 | 2.64 | | 6.35 | 6.36 | |
| December | 7.45 | 7.72 | | 2.19 | 3.08 | | 5.34 | 5.92 | |

Source: National Agricultural Statistics Service, USDA.

Table 14--Grapefruit: Average monthly equivalent on-tree prices received by growers, California, 1990-92

| Month | Fresh grapefruit | | | Processing grapefruit | | | All grapefruit | | |
|------------------------------|------------------|-------|------|-----------------------|-------|-------|----------------|------|------|
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
| --Dollars per 64-67-lb box-- | | | | | | | | | |
| January | 11.35 | 9.31 | 6.45 | -1.19 | -2.00 | -1.73 | 10.00 | 7.89 | 5.22 |
| February | 10.83 | 7.03 | 5.76 | -1.42 | -2.02 | -1.67 | 8.07 | 5.17 | 3.99 |
| March | 12.01 | 7.84 | 5.83 | -1.32 | -2.02 | -1.23 | 8.85 | 5.53 | 4.13 |
| April | 12.71 | 8.85 | 7.07 | -1.38 | -2.01 | -1.03 | 7.60 | 4.99 | 4.15 |
| May | 14.12 | 8.58 | 8.33 | -0.60 | -1.97 | -0.92 | 7.74 | 4.05 | 4.32 |
| June | 13.73 | 10.05 | 7.55 | -0.90 | -1.97 | -0.41 | 8.04 | 5.42 | 4.52 |
| July | 10.02 | 8.99 | 7.21 | -0.52 | -1.99 | -0.53 | 5.63 | 4.61 | 4.06 |
| August | 7.15 | 7.55 | 6.35 | -1.74 | -2.00 | -0.56 | 3.17 | 3.43 | 3.32 |
| September | 2.40 | 3.25 | 7.05 | -1.94 | -2.02 | -0.86 | 0.58 | 1.13 | 3.73 |
| October | 1.85 | 2.05 | 7.17 | -1.82 | -2.02 | -0.74 | 1.06 | 1.20 | 4.79 |
| November | 6.43 | 7.77 | | -2.01 | -1.83 | | 5.51 | 6.60 | |
| December | 9.66 | 8.89 | | -1.99 | -1.86 | | 7.31 | 6.90 | |

Source: National Agricultural Statistics Service, USDA.

U.S. Lemon Crop Forecast Up 12 Percent, but Limes Down

Increased California and Arizona lemon production will put downward pressure on lemon prices in 1992/93. Florida's 1992/93 lime crop was damaged by Hurricane Andrew, but imports of Mexican limes dampened price hikes.

Larger Lemon Crops in California and Arizona

The 1992/93 U.S. lemon crop is expected to be up 12 percent from last season and 20 percent more than in 1990/91. California's lemon forecast is 12.5 percent larger than 1991/92 lemon output. If the forecast of 646,000 short tons is realized, it would be California's biggest lemon crop since 1987/88, when production was the same. Arizona is expected to produce 217,000 tons of lemons in 1992/93, the largest crop since 1986/87 when production was 270,000 tons.

The December 1990 freeze did varying amounts of tree damage in California and 1990/91 bearing acreage fell to its lowest level since 1974/75. The unharvested portion of the 1990/91 lemon crop was damaged, and the 1991/92 crop was smaller than it might have been due to defoliation and limb damage. California production dropped 6 percent in 1990/91 but regained 2 percent the following year. Although production recovered from the freeze, reduction in bearing acreage and a low ratio of recently planted acres indicate less California lemon production over the next decade.

The California-Arizona lemon industry reported that nearly 20 percent of the crop was harvested during the first 3 months (August-October) of the 1992/93 season, compared to 16 percent of the crop for the same time the year before. The share of lemons for fresh use was 64 percent, compared to 57 percent at the same time early in the

1991/92 season. Fresh domestic shipments accounted for 48 percent, processing 36 percent, and fresh exports for 16 percent of early-1992/93 crop utilization.

In 1991/92, domestic fresh shipments totaled 332,000 short tons, 44 percent of utilization, processed use was 309,100 tons (40 percent), and export fresh shipments were 120,400 tons (16 percent). The industry reported 1991/92 lemon production was up 6 percent from the prior season, with most of the additional lemons being processed.

Demand for fresh-market lemons is fairly stable and not responsive to price changes, so excess production is processed. Compared to the 1990/91 season, processed use increased 14 percent, while domestic shipments gained 3 percent and exports dipped 2 percent.

Larger Crops Move Lemon Prices Down

Grower prices (on-tree equivalent) for fresh-market lemons dropped in 1991/92 (August-July) from the previous two seasons. The U.S. season-average price was \$16.19 per 76-pound box in 1991/92, compared to \$19.56 in 1990/91 and \$18.19 in 1989/90. Price gains are not likely in the coming months given expected production. The September fresh lemon price was 36 percent below a year earlier, and the October 1992 price was down 48 percent from October 1991.

F.o.b. prices for California-Arizona lemons averaged \$18.28 per 38-pound carton (size 140) in September 1992, compared to \$24.50 in September 1991. Prices came down as the 1991/92 season progressed, averaging \$12 per carton in December 1991 and \$11.68 in February 1992. Lemon prices rose seasonally from March through August and are expected to decline seasonally through the winter, likely remaining below year-earlier levels.

Florida Lime Crop Reduced 16 Percent by Hurricane Andrew

About two-thirds of the 1992/93 lime crop was harvested before August 24, 1992, when Hurricane Andrew struck Dade County in south Florida. Nearly all Florida commercial lime production is located in Dade County. Following the hurricane, the lime production forecast was reduced from 66,000 short tons to 55,000. Since 1980/81, Florida lime production has fluctuated between 53,000 and 76,000 tons.

Figure 9
U.S. Lemon Production, Use, and Price

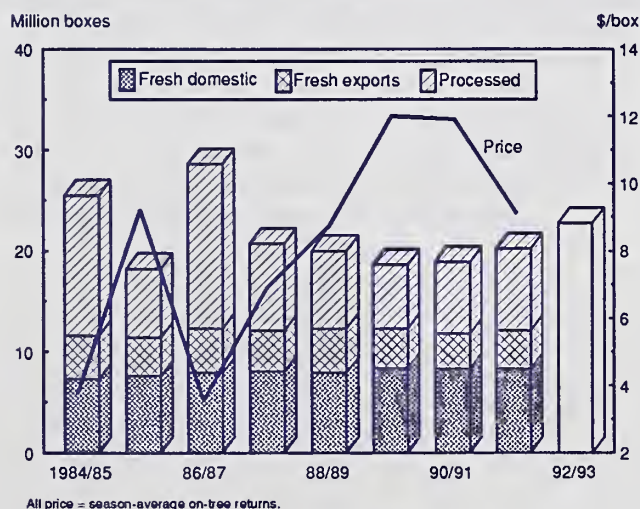


Table 15--Lemons: Average monthly equivalent on-tree prices received by growers, United States, 1990-92

| Month | Fresh lemons | | | Processing lemons | | | All lemons | | |
|---------------------------|--------------|-------|-------|-------------------|-------|-------|------------|-------|-------|
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
| --Dollars per 76-lb box-- | | | | | | | | | |
| January | 12.83 | 24.56 | 9.99 | 0.24 | -1.36 | -1.68 | 8.67 | 7.23 | 3.83 |
| February | 15.42 | 18.65 | 10.47 | 0.38 | -1.36 | -1.72 | 9.89 | 9.69 | 3.97 |
| March | 17.03 | 18.35 | 13.46 | 0.44 | -1.36 | -1.59 | 10.24 | 13.89 | 7.18 |
| April | 17.53 | 22.01 | 14.37 | 0.44 | -1.36 | -1.55 | 11.19 | 17.62 | 7.11 |
| May | 18.13 | 25.31 | 14.17 | 0.44 | -1.36 | -1.55 | 12.20 | 20.60 | 7.75 |
| June | 19.33 | 24.21 | 15.67 | 0.44 | -1.36 | -1.55 | 13.24 | 18.38 | 9.26 |
| July | 20.03 | 30.51 | 15.87 | 0.52 | -1.36 | -1.55 | 13.40 | 21.95 | 8.92 |
| August | 17.11 | 29.47 | 17.85 | 0.16 | -0.03 | -1.29 | 10.81 | 20.54 | 10.63 |
| September | 18.06 | 31.14 | 20.08 | 0.22 | -0.15 | -1.15 | 12.43 | 23.96 | 13.30 |
| October | 17.08 | 24.08 | 12.42 | 0.22 | -0.50 | -1.23 | 11.12 | 19.09 | 6.49 |
| November | 8.44 | 14.29 | | -0.12 | -1.15 | | 4.75 | 8.99 | |
| December | 8.20 | 6.49 | | -1.02 | -1.57 | | 2.96 | 2.90 | |

Source: National Agricultural Statistics Service, USDA.

Table 16--Limes: Average monthly equivalent on-tree prices received by growers, Florida, 1990-92

| Month | Fresh limes | | | Processing limes | | | All limes | | |
|---------------------------|-------------|-------|-------|------------------|-------|-------|-----------|-------|-------|
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
| --Dollars per 88-lb box-- | | | | | | | | | |
| January | 40.80 | 32.90 | 21.90 | -- | -2.65 | -2.60 | 40.80 | 21.05 | 17.92 |
| February | 68.80 | 44.90 | 33.90 | -- | -2.65 | -2.60 | 68.80 | 31.69 | 25.35 |
| March | 49.80 | 55.90 | 23.50 | -- | -2.65 | -- | 49.80 | 40.69 | 23.50 |
| April | 41.50 | 39.50 | 7.00 | -- | -- | -- | 41.50 | 39.50 | 7.00 |
| May | 28.50 | 7.90 | 4.00 | -- | -2.60 | -- | 28.50 | 6.75 | 4.00 |
| June | 4.40 | -0.10 | 0.60 | 0.55 | -0.40 | -2.80 | 3.01 | -0.24 | -0.58 |
| July | 2.40 | 3.90 | 1.60 | -0.40 | -0.40 | -1.80 | 1.47 | 1.49 | -0.31 |
| August | 16.90 | 10.90 | 2.60 | -0.90 | -0.40 | -1.80 | 8.54 | 6.40 | 0.73 |
| September | 19.90 | 16.90 | -- | -0.90 | -2.60 | -- | 9.20 | 12.57 | -- |
| October | 23.90 | 18.90 | -- | -2.65 | -2.60 | -- | 12.55 | 14.23 | -- |
| November | 24.90 | 17.90 | | -2.65 | -2.60 | | 11.53 | 14.65 | |
| December | 32.90 | 23.90 | | -2.65 | -2.60 | | 20.35 | 18.84 | |

Source: National Agricultural Statistics Service, USDA.

Imports are a significant portion of the U.S. lime supply and, in 1990/91, lime imports exceeded Florida production for the first time, accounting for nearly 60 percent of total supply. That season the United States imported 58,725 short tons of fresh limes, with about 95 percent from Mexico. Lime imports likely will rise in 1992/93 due to the crop loss in Florida.

Imports Stifle Lime Price Rise

Lime prices shot up dramatically following Hurricane Andrew, but moderated as imports from Mexico increased. Although lime imports from Mexico are over half of U.S. consumption, they are only about 6 percent of Mexican production. However, Mexico produces mostly Key limes which do not substitute for the Persian limes grown in Florida. Persian limes, grown mostly in the Mexican State Veracruz, are produced for the U.S. market and virtually all export-grade Persians are shipped to the United States. Because of the alternative source of limes in Mexico, U.S. prices are expected to be only moderately above last year.

Lime prices move up and down slowly over the season. The last 6 months of the marketing season (September-March) usually bring rising lime prices, with falling prices typical early in the season (April-August). Most of the 1992/93 crop, harvested prior to Hurricane Andrew, was marketed while prices were low, so the value of lime production this season will probably be down again from last season's \$22.8 million. In 1991/92, lime prices (on-tree-equivalent returns) averaged \$14.08 per 88-pound box, compared to \$22.52 the prior season. U.S. lime prices were below those of a year earlier prior to Hurricane Andrew from April through August 1992.

Weekly f.o.b. prices for Persian limes shipped from Florida fell sharply when the 1992/93 shipments began, from an average of \$7.94 per carton (44 pounds of 48's) in March 1992 to \$2.50 from June through August. F.o.b. prices of Mexican limes shipped through south Texas averaged \$4.13 in March 1992 and fell to \$2.33 in June. After Hurricane Andrew, Florida prices rose to \$4.87 and \$4.96 for 2 weeks in September, then dropped back and averaged \$3.71 for the entire month. By the week of October 23, Mexican lime prices averaged \$2.60, compared to \$2.24 in the same week of 1991. Ample supplies of Mexican limes are expected to dampen any further price increases due to less supply from Florida.

Figure 10

U.S. Shipments of Limes by Origin, 1991

1,000 lbs.

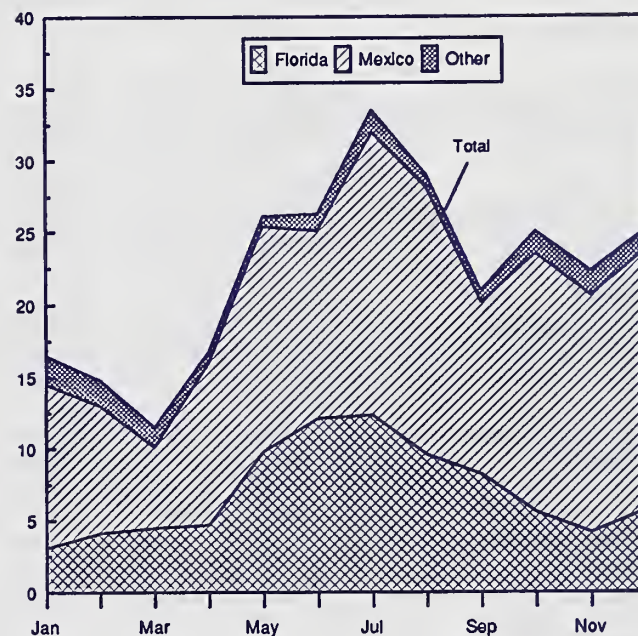


Figure 11

Florida Limes: On-Tree Prices

\$/box

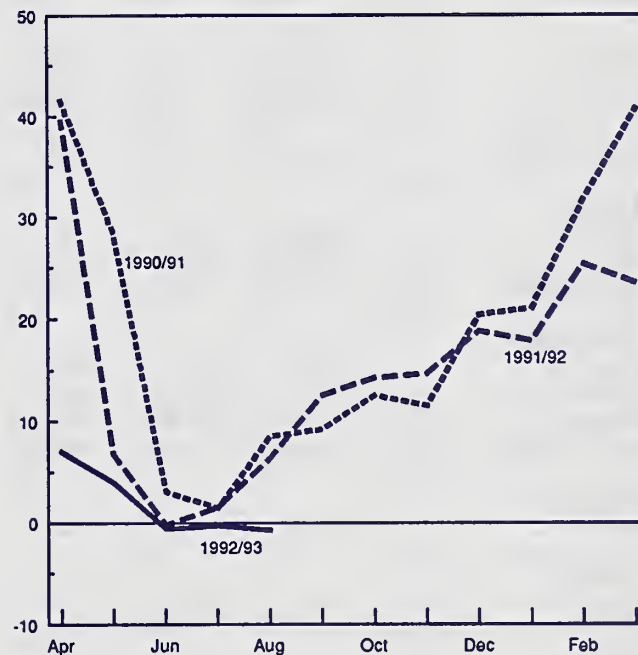


Table 17--Citrus fruit: Season-average equivalent on-tree returns received by growers, by State, variety, and use, 1989/90-1991/92

| Variety and State | Fresh | | | Processing | | | All | | |
|-----------------------------|---------|---------|---------|------------|---------|---------|---------|---------|---------|
| | 1989/90 | 1990/91 | 1991/92 | 1989/90 | 1990/91 | 1991/92 | 1989/90 | 1990/91 | 1991/92 |
| --Dollars per box 1/-- | | | | | | | | | |
| ORANGES: | | | | | | | | | |
| Florida | 10.31 | 8.46 | 8.52 | 5.98 | 5.66 | 5.89 | 6.21 | 5.89 | 6.10 |
| Early and midseason | 9.55 | 8.75 | 9.40 | 5.74 | 5.17 | 5.09 | 6.01 | 5.38 | 5.49 |
| Valencia | 13.75 | 8.60 | 6.70 | 6.34 | 6.35 | 7.03 | 6.53 | 6.58 | 7.01 |
| California | 8.22 | 20.29 | 8.47 | 1.63 | -0.89 | -0.25 | 5.98 | 12.48 | 5.16 |
| Navel and miscellaneous | 7.97 | 14.90 | 10.58 | 1.91 | -1.18 | -0.50 | 6.33 | 8.30 | 7.93 |
| Valencia | 8.78 | 27.38 | 4.74 | 1.53 | -0.98 | -0.41 | 5.41 | 19.22 | 2.04 |
| Arizona | 8.30 | 19.86 | 6.42 | 2.21 | -1.25 | -0.52 | 6.60 | 15.85 | 4.64 |
| Navel and miscellaneous | 9.97 | 13.50 | 10.68 | 0.88 | -0.89 | -0.19 | 9.06 | 11.85 | 9.12 |
| Valencia | 7.58 | 23.18 | 3.84 | 2.34 | -1.33 | -0.60 | 5.81 | 17.69 | 2.45 |
| Texas | 7.92 | 3/ | 12.77 | 3.00 | 3/ | -- | 5.71 | 3/ | 12.77 |
| Early and midseason | 7.92 | 3/ | 13.38 | 3.23 | 3/ | -- | 6.19 | 3/ | 13.38 |
| Valencia | 2/ | 3/ | 11.50 | 2.43 | 3/ | -- | 2.43 | 3/ | 11.50 |
| United States 4/ | 8.49 | 14.84 | 8.42 | 5.25 | 5.29 | 5.00 | 6.13 | 6.78 | 5.83 |
| Early, midseason, and navel | 8.23 | 12.05 | 10.28 | 5.21 | 4.78 | 4.62 | 6.14 | 5.79 | 6.14 |
| Valencia | 9.10 | 17.83 | 5.13 | 5.31 | 6.03 | 5.47 | 6.21 | 8.14 | 5.40 |
| GRAPEFRUIT: | | | | | | | | | |
| Florida | 10.00 | 8.83 | 8.69 | 3.06 | 2.08 | 4.25 | 5.65 | 5.66 | 6.64 |
| Seedless | 10.00 | 8.83 | 8.69 | 3.00 | 1.93 | 4.21 | 5.73 | 5.73 | 6.69 |
| Seeded | 5/ | 5/ | 5/ | 3.84 | 3.93 | 4.81 | 3.84 | 3.93 | 4.81 |
| Texas | 7.34 | 3/ | 13.52 | 0.56 | 3/ | -- | 6.00 | 3/ | 13.52 |
| California | 10.49 | 7.86 | 6.85 | -1.13 | -1.99 | -0.75 | 6.28 | 4.40 | 4.10 |
| Arizona | 11.35 | 7.45 | 5.85 | -1.31 | -2.00 | -1.00 | 8.27 | 4.66 | 3.99 |
| United States 4/ | 10.00 | 8.64 | 8.24 | 2.53 | 1.62 | 3.51 | 5.86 | 5.48 | 6.16 |
| LEMONS: | | | | | | | | | |
| California | 18.23 | 20.91 | 15.67 | 0.16 | -0.83 | -1.30 | 12.17 | 12.96 | 8.93 |
| Arizona | 17.93 | 14.31 | 17.77 | -0.23 | -0.68 | -1.82 | 11.21 | 8.13 | 9.63 |
| United States | 18.19 | 19.56 | 16.19 | 0.10 | -0.79 | -1.44 | 12.02 | 11.91 | 9.10 |
| TANGERINES: | | | | | | | | | |
| Florida | 24.40 | 25.30 | 22.60 | 2.29 | 3.19 | 4.04 | 15.28 | 17.10 | 18.07 |
| California | 22.28 | 23.68 | 18.64 | 0.85 | -1.78 | -0.89 | 16.95 | 15.67 | 12.78 |
| Arizona | 18.68 | 20.18 | 14.54 | 0.72 | -1.78 | -0.99 | 14.49 | 16.41 | 10.40 |
| United States 4/ | 22.63 | 23.94 | 19.88 | 1.73 | 1.37 | 1.24 | 15.80 | 15.67 | 14.90 |
| TANGELOS: | | | | | | | | | |
| Florida | 8.05 | 9.70 | 9.20 | 3.30 | 3.21 | 4.90 | 5.10 | 6.11 | 7.06 |
| TEMPLES: | | | | | | | | | |
| Florida | 17.75 | 10.60 | 8.50 | 4.30 | 4.32 | 5.44 | 5.64 | 6.31 | 6.55 |
| LIMES: | | | | | | | | | |
| Florida | 22.52 | 22.52 | 14.08 | -1.26 | -1.26 | -0.90 | 13.99 | 13.99 | 9.12 |

1/ Net content of box varies. Approximated averages are as follows: oranges-California and Arizona, 75 lbs.; Florida, 90 lbs.; Texas, 85 lbs.; grapefruit-California, Desert Valleys and Arizona, 64 lbs.; other California areas, 67 lbs.; Florida, 85 lbs.; Texas, 80 lbs.; lemons, 76 lbs.; tangelos and temples, 90 lbs.; tangerines-California and Arizona, 75 lbs.; Florida, 95 lbs; and limes-Florida, 88 lbs.

2/ Texas had limited 1989/90 fresh Valencia sales.

3/ Sales insignificant due to December 1989 freeze damage.

4/ U.S. average price is weighted by the size of the container.

5/ Fresh sales insignificant and included in processed.

Source: National Agricultural Statistics Service, USDA.

Table 18--Citrus fruit: Season-average equivalent P.H.D. returns received by growers; by State, variety, and use 1989/90-1991/92 1/

| Variety and State | Fresh | | | Processing | | | All | | |
|--------------------------------|---------|---------|---------|------------|---------|---------|---------|---------|---------|
| | 1989/90 | 1990/91 | 1991/92 | 1989/90 | 1990/91 | 1991/92 | 1989/90 | 1990/91 | 1991/92 |
| --Dollars per box 2/-- | | | | | | | | | |
| ORANGES: | | | | | | | | | |
| Florida | 12.16 | 10.36 | 10.42 | 7.83 | 7.56 | 7.79 | 8.06 | 7.79 | 8.00 |
| Early and midseason | 11.40 | 10.20 | 11.30 | 7.59 | 7.07 | 6.99 | 7.86 | 7.28 | 7.39 |
| Valencia | 15.60 | 10.50 | 8.60 | 8.19 | 8.25 | 8.93 | 8.38 | 8.48 | 8.91 |
| California | 10.00 | 22.30 | 10.31 | 3.45 | 0.96 | 1.48 | 7.77 | 14.46 | 7.02 |
| Navel and miscellaneous | 9.67 | 16.68 | 12.34 | 3.61 | 0.89 | 1.51 | 8.03 | 10.08 | 9.69 |
| Valencia | 10.73 | 29.68 | 6.71 | 3.30 | 1.12 | 1.47 | 7.36 | 21.52 | 4.01 |
| Arizona | 10.18 | 21.98 | 8.32 | 4.14 | 0.95 | 1.41 | 8.49 | 17.99 | 6.54 |
| Navel and miscellaneous | 11.67 | 15.28 | 12.44 | 2.58 | 0.89 | 1.57 | 10.76 | 13.63 | 10.88 |
| Valencia | 9.53 | 25.48 | 5.81 | 4.29 | 0.97 | 1.37 | 7.76 | 19.99 | 4.42 |
| Texas | 9.10 | 3/ | 14.37 | 4.10 | 3/ | 0.00 | 6.85 | 3/ | 14.37 |
| Early and midseason | 9.10 | 3/ | 14.98 | 4.33 | 3/ | 0.00 | 7.34 | 3/ | 14.98 |
| Valencia | 0.00 | 3/ | 13.10 | 3.53 | 3/ | 0.00 | 3.53 | 3/ | 13.10 |
| United States 4/ | 10.27 | 16.80 | 10.27 | 7.09 | 7.20 | 6.90 | 7.96 | 8.69 | 7.72 |
| Early, midseason, and navel | 9.94 | 13.89 | 12.08 | 7.03 | 6.68 | 6.51 | 7.93 | 7.68 | 8.01 |
| Valencia | 11.04 | 19.93 | 7.08 | 7.18 | 7.95 | 7.38 | 8.01 | 10.09 | 7.32 |
| GRAPEFRUIT: | | | | | | | | | |
| Florida | 11.60 | 10.43 | 10.29 | 4.72 | 3.74 | 5.91 | 7.29 | 7.29 | 8.27 |
| Seedless | 11.60 | 10.43 | 10.29 | 4.67 | 3.60 | 5.88 | 7.37 | 7.35 | 8.32 |
| Seeded | 5/ | 5/ | 5/ | 5.44 | 5.53 | 6.41 | 5.44 | 5.53 | 6.41 |
| Texas | 8.44 | 3/ | 15.12 | 1.56 | 3/ | 0.00 | 7.08 | 3/ | 15.12 |
| California | 12.22 | 9.59 | 8.58 | 0.60 | -0.26 | 0.98 | 8.01 | 6.13 | 5.83 |
| Arizona | 13.08 | 9.18 | 7.58 | 0.42 | -0.27 | 0.73 | 10.00 | 6.39 | 5.72 |
| United States 4/ | 11.60 | 10.26 | 9.87 | 4.18 | 3.29 | 5.18 | 7.49 | 7.12 | 7.81 |
| LEMONS: | | | | | | | | | |
| California | 21.25 | 24.31 | 19.25 | 3.18 | 2.57 | 2.28 | 15.19 | 16.36 | 12.51 |
| Arizona | 20.95 | 17.71 | 21.35 | 2.79 | 2.72 | 1.76 | 14.23 | 11.53 | 13.21 |
| United States | 21.21 | 22.96 | 19.77 | 3.12 | 2.61 | 2.14 | 15.04 | 15.31 | 12.68 |
| TANGERINES: | | | | | | | | | |
| Florida | 27.00 | 27.90 | 25.20 | 5.29 | 6.19 | 7.04 | 18.05 | 19.85 | 20.77 |
| California | 24.23 | 25.98 | 20.61 | 2.80 | 0.52 | 1.08 | 18.90 | 17.97 | 14.75 |
| Arizona | 20.63 | 22.48 | 16.51 | 2.67 | 0.52 | 0.98 | 16.44 | 18.71 | 12.37 |
| United States 4/ | 24.85 | 26.40 | 22.16 | 4.32 | 4.12 | 3.66 | 18.15 | 19.12 | 17.21 |
| TANGELOS: | | | | | | | | | |
| Florida | 9.90 | 11.60 | 11.10 | 5.30 | 5.26 | 6.95 | 7.04 | 8.10 | 9.04 |
| TEMPLES: | | | | | | | | | |
| Florida | 19.60 | 12.50 | 10.40 | 6.30 | 6.37 | 7.49 | 7.62 | 8.32 | 8.55 |
| LIMES: | | | | | | | | | |
| Florida | 21.20 | 28.20 | 19.60 | 2.30 | 3.14 | 3.50 | 13.87 | 19.21 | 14.27 |

1/ P.H.D.--Packinghouse-door.

2/ Net content of box varies. Approximated averages are as follows: oranges-California and Arizona, 75 lbs.; Florida, 90 lbs.; Texas 85, lbs.; grapefruit-California, Desert Valleys and Arizona, 64 lbs.; other California areas, 67 lbs.; Florida, 85 lbs.; Texas, 80 lbs.; lemons, 76 lbs.; tangelos and temples, 90 lbs.; tangerines-California and Arizona, 75 lbs.; Florida, 95 lbs; and limes-Florida, 88 lbs.

3/ Sales insignificant due to December 1989 freeze damage.

4/ U.S. average price is weighted by the size of the container.

5/ Fresh sales insignificant and included in processed.

Source: National Agricultural Statistics Service, USDA.

Table 19--U.S. citrus fruits: Production, use, and value, 1987/88-1991/92

| Fruit and season | Production 1/ --1,000 short tons-- | Use of production | | | | Value of production Million dollars |
|------------------------|---|-------------------|------------|---------------------|------------|--|
| | | Fresh | | Processed | | |
| | | Quantity | Percentage | Quantity | Percentage | |
| | | | | | | |
| Oranges: | | | | 1,000 short tons | | |
| 1987/88 | 8,551 | 2,085 | 24.4 | 6,466 | 75.6 | 1,774 |
| 1988/89 | 8,949 | 2,016 | 22.5 | 6,933 | 77.5 | 1,848 |
| 1989/90 | 7,745 | 2,103 | 27.2 | 5,642 | 72.8 | 1,465 |
| 1990/91 | 7,848 | 1,221 | 15.6 | 6,627 | 84.4 | 1,582 |
| 1991/92 | 8,861 | 2,144 | 24.2 | 6,717 | 75.8 | 1,599 |
| Grapefruit: | | | | | | |
| 1987/88 | 2,801 | 1,332 | 47.6 | 1,469 | 52.4 | 479 |
| 1988/89 | 2,844 | 1,395 | 49.1 | 1,449 | 50.9 | 416 |
| 1989/90 | 1,978 | 882 | 44.6 | 1,096 | 55.4 | 372 |
| 1990/91 | 2,256 | 1,241 | 55.0 | 1,015 | 45.0 | 393 |
| 1991/92 | 2,224 | 1,249 | 56.2 | 975 | 43.8 | 426 |
| Lemons: | | | | | | |
| 1987/88 | 785 | 459 | 58.5 | 326 | 41.5 | 202 |
| 1988/89 | 759 | 466 | 61.4 | 293 | 38.6 | 235 |
| 1989/90 | 706 | 466 | 66.0 | 240 | 34.0 | 280 |
| 1990/91 | 719 | 449 | 62.4 | 270 | 37.6 | 289 |
| 1991/92 | 768 | 459 | 59.8 | 309 | 40.2 | 256 |
| Limes: | | | | | | |
| 1987/88 | 57 | 38 | 66.7 | 19 | 33.3 | 23 |
| 1988/89 | 55 | 42 | 76.4 | 13 | 23.6 | 21 |
| 1989/90 | 72 | 44 | 61.1 | 28 | 38.9 | 23 |
| 1990/91 | 64 | 41 | 64.1 | 23 | 35.9 | 28 |
| 1991/92 | 70 | 47 | 67.1 | 23 | 32.9 | 23 |
| Tangelos: | | | | | | |
| 1987/88 | 189 | 63 | 33.3 | 126 | 66.7 | 33 |
| 1988/89 | 171 | 61 | 35.7 | 110 | 64.3 | 31 |
| 1989/90 | 132 | 50 | 37.9 | 82 | 62.1 | 21 |
| 1990/91 | 119 | 53 | 44.5 | 66 | 55.5 | 21 |
| 1991/92 | 117 | 59 | 50.4 | 58 | 49.6 | 23 |
| Tangerines: 2/ | | | | | | |
| 1986/87 | 228 | 157 | 68.9 | 71 | 31.1 | 70 |
| 1987/88 | 218 | 153 | 70.2 | 65 | 29.8 | 80 |
| 1988/89 | 239 | 153 | 64.0 | 86 | 36.0 | 83 |
| 1989/90 | 164 | 111 | 67.7 | 53 | 32.3 | 72 |
| 1990/91 | 166 | 112 | 67.5 | 54 | 32.5 | 74 |
| 1991/92 | 258 | 189 | 73.3 | 69 | 26.7 | 104 |
| Temples: | | | | | | |
| 1987/88 | 160 | 58 | 36.3 | 102 | 63.8 | 28 |
| 1988/89 | 169 | 39 | 23.1 | 130 | 76.9 | 28 |
| 1989/90 | 63 | 6 | 9.5 | 57 | 90.5 | 11 |
| 1990/91 | 113 | 36 | 31.9 | 77 | 68.1 | 21 |
| 1991/92 | 106 | 39 | 36.8 | 67 | 63.2 | 20 |
| Total: 1/ | | | | | | |
| 1987/88 | 12,761 | 4,188 | 32.8 | 8,573 | 67.2 | 2,619 |
| 1988/89 | 13,186 | 4,172 | 31.6 | 9,014 | 68.4 | 2,663 |
| 1989/90 | 10,860 | 3,662 | 33.7 | 7,198 | 66.3 | 2,243 |
| 1990/91 | 11,285 | 3,153 | 27.9 | 8,132 | 72.1 | 2,409 |
| 1991/92 | 12,404 | 4,186 | 33.7 | 8,218 | 66.3 | 2,452 |

1/ Some totals may not add due to rounding.

2/ Per program modification, all tangerines include honey tangerines beginning with the 1987/88 season, and sunburst tangerines beginning with the 1989/90 season.

Source: National Agricultural Statistics Service, USDA.

Table 20--Apples, commercial crop 1/: Total production and season-average price received by growers, 1990, 1991, and indicated 1992 production

| State and area | Production 2/ | | | Price per short ton | |
|-----------------|----------------------|---------|---------|---------------------|------|
| | 1990 | 1991 | 1992 | 1990 | 1991 |
| | --1,000 short tons-- | | | --Dollars-- | |
| Eastern States: | | | | | |
| Connecticut | 16.5 | 13.5 | 17.5 | 528 | 546 |
| Delaware | 8.5 | 12.5 | 10.0 | 232 | 218 |
| Georgia | 11.0 | 16.0 | 12.5 | 264 | 272 |
| Maine | 44.0 | 43.5 | 45.5 | 448 | 460 |
| Maryland | 16.5 | 21.0 | 20.0 | 274 | 298 |
| Massachusetts | 42.5 | 40.0 | 46.5 | 478 | 510 |
| New Hampshire | 24.0 | 24.0 | 27.5 | 484 | 474 |
| New Jersey | 30.0 | 46.0 | 27.5 | 260 | 332 |
| New York | 495.0 | 525.0 | 575.0 | 258 | 254 |
| North Carolina | 115.0 | 130.0 | 105.0 | 200 | 178 |
| Pennsylvania | 225.0 | 275.0 | 270.0 | 284 | 228 |
| Rhode Island | 3.0 | 2.8 | 3.0 | 516 | 580 |
| South Carolina | 17.0 | 20.0 | 22.5 | 254 | 198 |
| Vermont | 21.5 | 24.0 | 23.5 | 426 | 438 |
| Virginia | 105.0 | 210.0 | 185.0 | 202 | 218 |
| West Virginia | 75.0 | 100.0 | 105.0 | 192 | 198 |
| Total | 1,249.5 | 1,503.3 | 1,496.0 | | |
| Central States: | | | | | |
| Arkansas | 6.0 | 5.0 | 5.5 | 382 | 338 |
| Illinois | 30.0 | 34.5 | 38.0 | 350 | 348 |
| Indiana | 28.5 | 30.0 | 28.0 | 400 | 428 |
| Iowa | 4.8 | 4.0 | 4.5 | 442 | 580 |
| Kansas | 4.0 | 3.8 | 3.0 | 430 | 472 |
| Kentucky | 4.5 | 10.0 | 5.0 | 410 | 442 |
| Michigan | 375.0 | 465.0 | 415.0 | 206 | 214 |
| Minnesota | 10.0 | 12.7 | 15.5 | 748 | 858 |
| Missouri | 20.5 | 20.0 | 18.5 | 338 | 416 |
| Ohio | 60.0 | 60.0 | 57.5 | 348 | 470 |
| Tennessee | 4.3 | 6.5 | 6.0 | 358 | 308 |
| Wisconsin | 24.0 | 30.0 | 31.5 | 500 | 416 |
| Total | 571.5 | 681.5 | 628.0 | | |
| Western States: | | | | | |
| Arizona | 32.0 | 28.5 | 42.5 | 160 | 282 |
| California | 390.0 | 400.0 | 420.0 | 312 | 452 |
| Colorado | 17.5 | 37.5 | 45.0 | 294 | 312 |
| Idaho | 82.5 | 60.0 | 47.5 | 270 | 386 |
| New Mexico | 3.4 | 1.2 | 6.0 | 358 | 452 |
| Oregon | 90.0 | 60.0 | 82.5 | 224 | 372 |
| Utah | 12.0 | 27.5 | 31.0 | 376 | 360 |
| Washington | 2,400.0 | 2,150.0 | 2,350.0 | 328 | 442 |
| Total | 3,027.4 | 2,764.7 | 3,024.5 | | |
| United States | 4,848.4 | 4,949.4 | 5,148.5 | 302 | 362 |

1/ In orchards of 100-or-more bearing age-trees.

2/ Includes unharvested production and harvested not sold (1,000 short tons): 1990-19.3, 1991-30.9.

Source: National Agricultural Statistics Service and Economic Research Service, USDA.

Larger Noncitrus Fruit Crops Pressure Grower Prices

Favorable weather increased U.S. apple, pear, and grape crops in 1992, putting pressure on grower prices. However, decreased peach production in the eastern and southern regions of the United States reduced the 1992 crop and raised monthly prices above the year earlier. Strawberry production is expected to be down 7 percent from the 1991 record.

U.S. Apple Crop Up 4 Percent

The final forecast for the 1992 U.S. apple crop was 5.15 million short tons, 4 percent more than last year's production. If realized, the 1992 crop would be the second largest on record after 1987. Production in the Western States (led by Washington, California, and Oregon) is expected to be 9 percent larger than in 1991. A warm August in Washington caused the crop to mature well ahead of normal and resulted in an early harvest.

The larger, earlier harvest lowered prices for Washington apples in September and October. F.o.b. prices for all varieties were down 10-20 percent from a year earlier. A limited supply of smaller-sized Washington apples boosted prices for 125's (Red Delicious) about 15 percent. Prices for most varieties and sizes were also 10-20 percent lower than a year earlier in California.

Michigan apple crop prospects appeared dim after spring freeze damage and high winds, but good fruit sizing and adequate moisture resulted in a final forecast of 415,000 short tons, a shortfall of 11 percent from 1991.

Apple production in the Eastern States was forecast fractionally lower in 1992, as smaller crops in Pennsylvania, Virginia, and North Carolina more than offset a larger crop in New York, the region's largest producer. Cool, wet weather slowed fruit development in most States and resulted in a harvest that was 1 to 2 weeks later than last year. The larger crop in New York lowered f.o.b. prices about 20 percent from a year earlier. Competing supplies from other States pressured prices in Pennsylvania, Virginia, and Michigan.

The U.S.-average grower price for apples in October 1992 was 22.4 cents per pound, down 7 percent from a year earlier. The October retail price for Red Delicious followed a similar pattern, down 10 percent. The larger, Western-U.S. apple crop is expected to keep fresh-market apple prices lower than last year through July 1993. The International Apple Institute reported that November 1, 1992, U.S. apple stocks intended for the fresh market were up 14 percent from last year. Total apple stocks (for fresh and processing use) of Red Delicious were up 16 percent, Golden Delicious up 29 percent, and Granny Smith up 87 percent from a year ago.

An early harvest in the West and good demand increased Washington's weekly shipments in early October above the last 2 years. By November 1, new crop shipments were 35 percent above a year earlier, but about 86 percent of the crop remained to be shipped, up from 82 percent last year. In Michigan, the industry reported strong demand for most processing varieties. However, the minimum juice-apple price is \$5.75 per cwt, down 11 percent from 1991/92.

Pear Crop Up 4 Percent, Grower Prices Moderate

The final forecast for the 1992 U.S. pear crop was 942,450 short tons, up 4 percent from 1991 and the second largest on record. The Bartlett crop in California, Oregon, and Washington is forecast up 4 percent. The California harvest was complete in late August. Production of other-than-Bartlett pears (fall and winter pears) in the Pacific Coast States is expected to total 355,000 tons, up 3 percent from 1991, but down 2 percent from 1990.

The larger California crop and heavy fruit supplies pressured grower fresh-market pear prices in July and August. In September and October, f.o.b. prices for pears in California and the Northwest were below last year for most sizes and varieties.

Table 21--U.S.-average monthly grower prices for fresh apples and pears, 1990/91-1992/93

| Month | Apples | | | Pears | | |
|-----------------|---------|---------|---------|---------|---------|---------|
| | 1990/91 | 1991/92 | 1992/93 | 1990/91 | 1991/92 | 1992/93 |
| --Cents/pound-- | | | | | | |
| Jul | 20.3 | 24.6 | 27.1 | 20.5 | -- | 19.5 |
| Aug | 22.3 | 24.4 | 30.4 | 13.7 | 17.1 | 13.8 |
| Sep | 22.2 | 26.6 | 29.3 | 16.3 | 17.9 | 21.3 |
| Oct | 19.3 | 24.1 | 22.4 | 16.6 | 20.0 | 19.9 |
| Nov | 19.6 | 25.3 | | 17.9 | 20.1 | |
| Dec | 20.9 | 25.7 | | 17.1 | 20.1 | |
| Jan | 20.1 | 24.8 | | 17.3 | 18.9 | |
| Feb | 20.5 | 25.0 | | 18.9 | 19.2 | |
| Mar | 20.3 | 24.5 | | 19.9 | 19.1 | |
| Apr | 20.2 | 24.1 | | 20.1 | 19.7 | |
| May | 22.5 | 25.0 | | 24.7 | 22.8 | |
| Jun | 23.2 | 25.7 | | 39.7 | -- | |
| Jul | 24.6 | 27.1 | | -- | 19.5 | |

-- = Insufficient marketing to establish price.

Sources: National Agricultural Statistics Service and Economic Research Service, USDA.

USDA's cold storage report indicated that October 31, 1992, fresh pear stocks were unchanged from a year earlier. However, strong processor demand early in the season resulted in higher processor prices in Washington and Oregon, and only marginally lower prices in California.

U.S. Grape Crop Up 10 Percent in 1992

U.S. grape production is expected to be 6.14 million tons, up 10 percent from 1991. California production is up 12 percent, led by a 22-percent increase in raisin-type grapes. Wine-type and table-type grapes were up 5 percent from 1991. Less favorable weather lowered output in Michigan and New York, but Washington expects a 10 percent larger crop. Grape production outside of California is expected to account for about 9 percent of the U.S. total in 1992.

Strong demand for California grape concentrate and increased shipments of California wine lifted cash and contract prices for 1992 grapes for processing into juice or wine. The industry reported higher prices were necessary to attract more Zinfandel and other varieties required to meet growing demand for premium-segment wines (\$4-\$7 per bottle).

Demand from California's juice and wine sectors reduced the grape supplies available for raisins. Despite a much larger raisin-type grape crop than last year, the raisin price negotiated between the Raisin Bargaining Association and the packers remained unchanged from last year at \$1,155 per ton. The Raisin Administrative Committee estimated 1992/93 raisin production about the same as 1991/92.

Table 22--U.S.-average monthly grower prices for fresh peaches and strawberries, 1990-92

| Month | Peaches | | | Strawberries | | |
|-----------------|---------|------|------|--------------|-------|-------|
| | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
| --Cents/pound-- | | | | | | |
| Jan | -- | -- | -- | 115.0 | 125.0 | 109.0 |
| Feb | -- | -- | -- | 83.2 | 94.3 | 82.5 |
| Mar | -- | -- | -- | 74.0 | 63.5 | 73.1 |
| Apr | -- | -- | -- | 50.3 | 73.4 | 49.8 |
| May | 29.1 | 28.9 | 28.1 | 35.2 | 50.0 | 41.0 |
| Jun | 24.4 | 23.6 | 25.7 | 46.9 | 36.5 | 65.3 |
| Jul | 27.1 | 16.4 | 19.3 | 40.7 | 46.5 | 49.5 |
| Aug | 24.8 | 16.4 | 23.1 | 50.0 | 35.0 | 89.2 |
| Sep | 24.4 | 22.7 | 24.3 | 55.0 | 35.0 | 61.1 |
| Oct | -- | -- | -- | 75.0 | 55.0 | 56.3 |
| Nov | -- | -- | -- | 125.0 | 110.0 | |
| Dec | -- | -- | -- | 109.0 | 97.9 | |

-- = Insufficient marketing to establish price.

Sources: National Agricultural Statistics Service and Economic Research Service, USDA.

Table 23--U.S. noncitrus fruit production, 1989-92

| Commodity | 1989 | 1990 | 1991 | Indicated |
|----------------------|--------|--------|--------|-----------|
| | | | | 1992 |
| --1,000 short tons-- | | | | |
| Apples | 4,981 | 4,848 | 4,949 | 5,149 |
| Apricots | 120 | 122 | 96 | 110 |
| Cherries, sweet | 193 | 157 | 152 | 170 |
| Cherries, tart | 132 | 104 | 95 | 133 |
| Cranberries | 187 | 170 | 211 | 210 |
| Grapes | 5,931 | 5,660 | 5,556 | 6,138 |
| Nectarines | 220 | 232 | 215 | 240 |
| Olives | 123 | 131 | 65 | 135 |
| Peaches | 1,178 | 1,117 | 1,336 | 1,258 |
| Pears | 917 | 964 | 905 | 942 |
| Plums and prunes | 1,018 | 734 | 832 | 892 |
| Strawberries 1/ | 547 | 599 | 657 | 611 |
| Total | 15,547 | 14,838 | 15,069 | 15,987 |

1/ Production in six selected States.

Source: National Agricultural Statistics Service and Economic Research Service, USDA.

U.S. Peach Crop Down in 1992

Spring freeze damage in the Eastern and Southeastern United States reduced 1992 all-peach production to 1.26 million short tons, down 6 percent from 1991. The U.S. peach crop (excluding California Clingstones) is expected to total 707,750 short tons, down 14 percent from last season.

The smaller U.S. crop buoyed grower's monthly prices for fresh-market peaches all season, up 5-20 percent from 1991. However, f.o.b. prices for fresh-market peaches in California, where Freestone production was up 5 percent, were generally lower than a year earlier. Production of California Clingstone peaches, which are mostly processed, was up 7 percent, and cannery prices were down about 1 percent. Wholesale canned peach prices, which remained unchanged from January through October 1992, will likely remain firm through next spring.

Strawberry Crop Down From 1991 Record

USDA's final forecast pegged total 1992 strawberry production for six selected States at 611,000 short tons, down 7 percent from 1991's record. Production declines in California, Michigan, and Oregon offset increased production in New Jersey, Washington, and Florida. From June to September 1992, the monthly grower price for fresh-market strawberries was higher than a year earlier. Late September and early October deliveries to California processors increased when fresh-market prices declined. However, deliveries to processors from March through October 1992 were 25 percent less than a year earlier.

Apple Exports Expected To Be Down in 1992/93, but Pear Exports May Top Last Year's Record

Fresh-market apple and pear exports reached record highs in 1991/92, helping boost grower prices. Larger world supplies in 1992/93 will likely reduce U.S. exports to the EC, but U.S. exports to Mexico and other expanding markets are expected to increase. The proposed North American Free Trade Agreement would reduce Mexico's trade barriers on deciduous fruit and increase exports to this market.

Higher U.S. season-average grower prices for apples and pears in 1991/92 resulted partially from a sharp increase in fresh-market export sales to Europe and growing markets in Mexico and Southeast Asia. The record-high prices occurred without a dramatic reduction in domestic supply and illustrated the importance of exports to grower returns. In 1991/92, 20 percent of fresh-market apple utilization was exported, up from 10 percent in 1986/87. Fresh-market pear exports represented 26 percent of the fresh-market pear utilization, up from 14 percent in 1987/88.

World Deciduous Fruit Production Increases in 1992/93

Spring freezes in 1991 cut 1991/92 fruit crops in most European countries. EC apple production fell 30 percent and pear production fell 18 percent. In 1992/93, fruit crops suffered no major damage and consequently rebounded with record-size crops. Northern Hemisphere apple production increased 35 percent and pear production 31 percent due mainly to larger U.S. and European crops.

Larger U.S. apple and pear crops in 1992/93 will result in lower export prices, but much larger EC supplies will reduce export opportunities to that region. However, some of last year's gain in European market share will likely remain in 1992/93. Furthermore, other fast growing deciduous fruit markets like Mexico, Hong Kong, Taiwan, and Venezuela are expected to continue expanding as per capita incomes increase, market development activities boost awareness and build demand, and trade barriers fall. U.S. fresh-market apple exports are expected to be less than the 1991/92 record, while pear exports may be above last year's record.

Proposed NAFTA Would Reduce Mexico's Tariffs on Deciduous Fruit

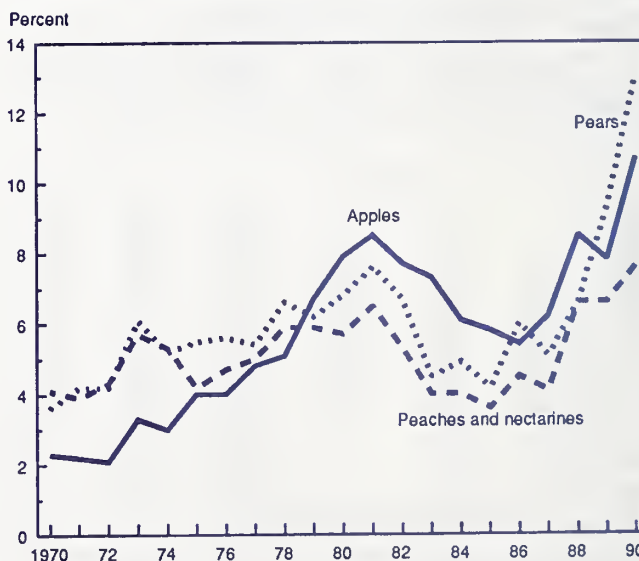
Several provisions in the proposed North American Free Trade Agreement (NAFTA) would likely lead to increased U.S. exports of a number of fresh-market deciduous fruits to Mexico. Upon implementation of the NAFTA on Jan-

uary 1, 1994, Mexico's 20-percent tariff on imports of U.S. apples would begin to be phased out in equal installments over a 10-year period. However, the tariff reduction applies only to quantities within a safeguard quota of 55,000 metric tons per year, which would increase 3 percent annually. Quantities over the annual maximum would be subject to a 20-percent tariff. U.S. exports to Mexico from July 1991 through June 1992 were 66,861 metric tons.

Under the proposed NAFTA, Mexico's 20-percent tariff on U.S. pears would be reduced to 15-percent and then phased out over 5 years. Its 20-percent tariff on U.S. peaches and nectarines would be phased out in equal installments over a 10-year period.

The NAFTA provisions would likely lead to larger U.S. exports of fresh deciduous fruit to Mexico. However, other factors, including Mexico's fluctuating fruit production, rising demand from increasing incomes, and discontinued import license requirements, have already increased U.S. fruit exports to Mexico the last several years. This trend is expected to continue in 1992/93.

Figure 12
U.S. Share of World Fresh Fruit Exports



Exports to Mexico Expected To Rise in 1992/93

Larger U.S. apple and pear production, moderate increases in Mexican production, rising incomes, and aggressive U.S. export marketing will likely boost fresh deciduous fruit exports to Mexico in 1993, maintaining Mexico as one of the top three markets for apples, pears, peaches, and nectarines. According to the U.S. agricultural counselor in Mexico City, total U.S. deciduous fruit exports to Mexico are expected to increase in 1992/93, continuing an increasing trend that has gained considerable momentum since 1989.

Apple exports to Mexico increased from 12,000 short tons in 1990/91 to 74,000 in 1991/92 after Mexico dropped its import licensing requirement in 1991. The larger 1991/92 apple supply in Mexico lowered consumer prices and fueled demand. Increased imports will likely contribute heavily to Mexico's growth in apple consumption during the next several years. Higher yields (resulting from better weather) are expected to increase Mexico's 1992/93 production, but lower producer prices and poor credit availability for some growers will pressure long-term industry growth.

Unlike apple production, which has increased in the last few years, the Mexican pear industry severely contracted in 1991/92 when many trees were removed from unprofitable orchards. Reduced domestic production and elimination of import licensing has helped to double pear exports to Mexico between 1988/89 and 1991/92. The import share of Mexico's total supply was almost 60 percent in 1991/92. A moderate increase in Mexican pear production in 1992/93 is expected. However, low pear prices due to increased imports, disease problems, and scarce water supplies in pear-producing regions will discourage long-run expansion in Mexico's pear industry.

In Mexico's peach industry, low domestic prices resulting from ample fruit supplies, lack of credit availability, and tight water supplies are contributing to declining acreage and production. Resolution of phytosanitary issues will likely increase peach and nectarine exports to Mexico in 1993.

Table 24--U.S. exports of selected fresh fruit and export share of U.S. fresh use, 1986/87-1991/92

| Commodity | Unit | 1986/87 | 1987/88 | 1988/89 | 1989/90 | 1990/91 | 1991/92 |
|---------------------------|----------------|---------|---------|---------|---------|---------|---------|
| Apples 1/ | Million pounds | 459.8 | 791.0 | 575.5 | 748.4 | 818.0 | 1,127.3 |
| | Percentage | 10.3 | 14.1 | 11.0 | 12.8 | 14.7 | 20.2 |
| Peaches and nectarines 2/ | Million pounds | 99.0 | 106.8 | 104.8 | 129.4 | 126.9 | 153.1 |
| | Percentage | 6.9 | 7.1 | 6.5 | 9.0 | 9.1 | 9.3 |
| Pears 3/ | Million pounds | 103.2 | 125.3 | 138.8 | 182.5 | 204.9 | 239.2 |
| | Percentage | 13.7 | 13.8 | 16.2 | 20.1 | 21.9 | 25.8 |

1/ Apple season begins in August.

2/ Peach season is on a calendar year basis beginning with first year listed.

3/ Pear season begins in July.

Source: Economic Research Service, USDA.

Smaller Tree Nut Supplies in 1992/93

Lower supplies of almonds, pecans, and walnuts are expected to put upward pressure on prices in 1992/93. Per capita tree-nut consumption in 1992/93 will likely decline from the 1991/92 record high of 2.51 pounds.

The total U.S. tree nut supply in 1992/93 is expected to be down 8 percent from last year and down 13 percent from the 1990/91 record. Almond production increased moderately, but the lowest carry-in stocks in 5 years have reduced the 1992/93 almond supply in the United States.

Smaller walnut and pecan crops and only moderately higher beginning stocks have lowered 1992/93 supplies. A record-large hazelnut crop is forecast, increasing the supply from last year. The larger 1992/93 pistachio crop will offset lower carry-in stocks, leaving supply above last year. Diminished supplies should maintain or strengthen grower prices in 1992/93 for most tree nuts.

World Almond Supply Down 3 Percent

Despite moderate world production gains, low beginning almond stocks in the United States reduced the 1992/93 world almond supply 3 percent. Total 1992/93 almond production by the world's leading producers is expected to total 845 million pounds (shelled basis). This is 15 percent higher than last season, but 9 percent below the 1990/91 record.

Almond production in Spain, the world's second largest producer after the United States, is expected to total 165 million pounds (shelled basis), up 30 percent from 1991/92. Crop quality and kernel size are expected to be good. Italy, Greece, and Turkey, the next three largest almond-producing countries, are expected to post gains as well. Together, the 3 countries will account for 20 percent of the increase in world almond production in 1992/93.

U.S. almond production in 1992/93 is forecast at 550 million pounds (shelled basis), up 12 percent from 1991/92. Cool weather and fog hampered pollination, reducing production potential. Warm early-season weather moved crop maturity about 2 weeks ahead of last year.

The lowest beginning stocks since 1987/88 and moderate 1992 production have reduced the U.S. almond supply to a 6-year low. Tighter supplies are expected to strengthen grower prices, likely reducing per capita consumption from 0.85 pounds in 1991/92 to an estimated 0.71 pounds in 1992/93.

Excellent domestic and export demand helped increase 1991/92 shipments despite higher prices. The average grower price for almonds in 1991/92 was \$1.14 per pound (shelled basis), up 23 percent from a year earlier. Domestic shipments were 217 million pounds, up 12 percent. Exports were up 5 percent to a record 378 million pounds. In 1992/93, higher U.S. prices and larger almond supplies

in Spain will likely reduce U.S. exports, especially to key markets in Europe.

World Hazelnut Supply Up 18 Percent

Despite low beginning stocks, world hazelnut (filbert) supplies will be record high in 1992/93 because of record-large crops in Turkey (the world's largest producer with 80 percent of world output) and the United States (third largest with 3 percent). However, production in Italy (second largest producer with 15 percent) is expected to decline 21 percent after last year's record-large crop.

Total production of hazelnuts in the four major producing countries in 1992 is forecast at 1.67 billion pounds (in-shell), 30 percent higher than last year and 12 percent above the previous record set in 1989/90. Nearly ideal growing conditions, plus the upward trend in hazelnut plantings because of high support prices, have boosted Turkey's 1992 production to an estimated 1.32 billion pounds (in-shell). Exports from Turkey are expected to increase one-fourth, pressuring world prices and increasing competition for U.S. exports.

U.S. hazelnut production is forecast at a record 53.4 million pounds (in-shell), 5 percent more than last season's record-large crop and 23 percent more than the 1990 crop. Oregon's crop is forecast at 53.0 million pounds, and Washington production is expected to be 400,000 pounds. A warm spring moved harvest 2-3 weeks ahead of normal. Harvest conditions in both States were excellent, with little rain and warm temperatures.

Larger U.S. production and supplies lowered grower prices in 1990/91 and 1991/92. Large beginning stocks and record large 1992/93 production will likely pressure hazelnut prices again, especially if Turkey's record crop is realized.

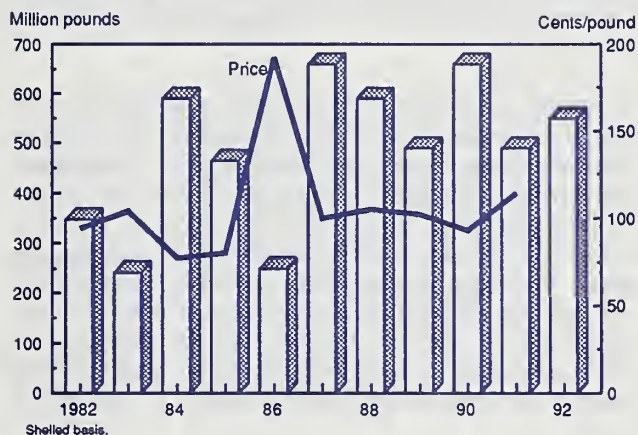
U.S. Pecan Crop Short

The October 1 forecast for the U.S. pecan crop is 207 million pounds (in-shell basis), up 1 percent from the September 1 forecast, but down 31 percent from last year. Production in Georgia (historically, the largest producer with about one-third of U.S. total), is forecast at 60 million pounds (in-shell), down 40 percent. Texas production is also expected to total 60 million, unchanged from 1991/92. Heat stress affected the crop in New Mexico, but the production forecast is unchanged from last year at 29 million pounds. The alternate bearing characteristic of pecans, and a variety of weather and pest problems, contributed to lower 1992 production in most States.

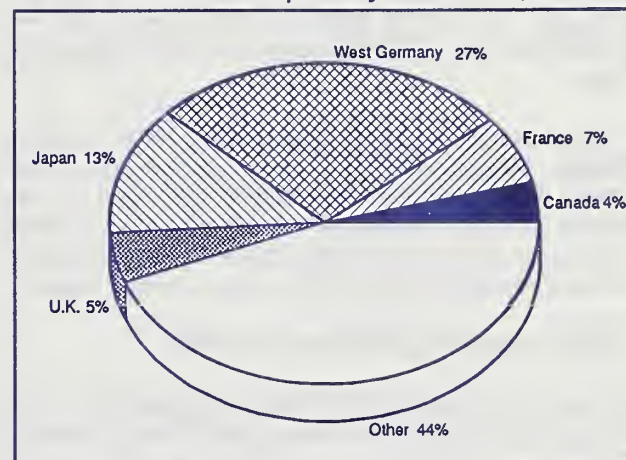
Figure 13

Tree Nuts at a Glance

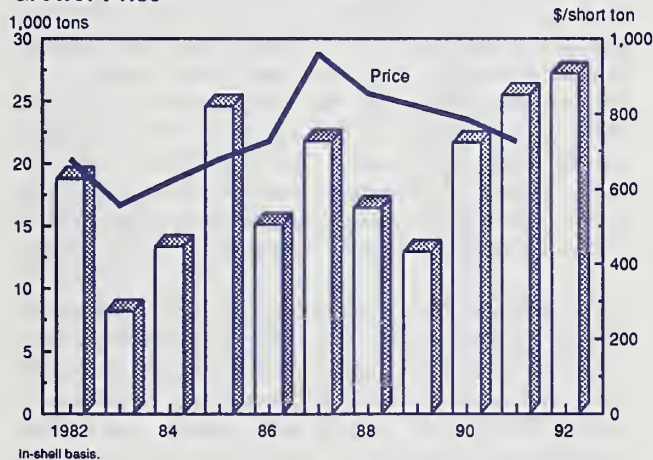
Almonds: Production and Season-Average Grower Price



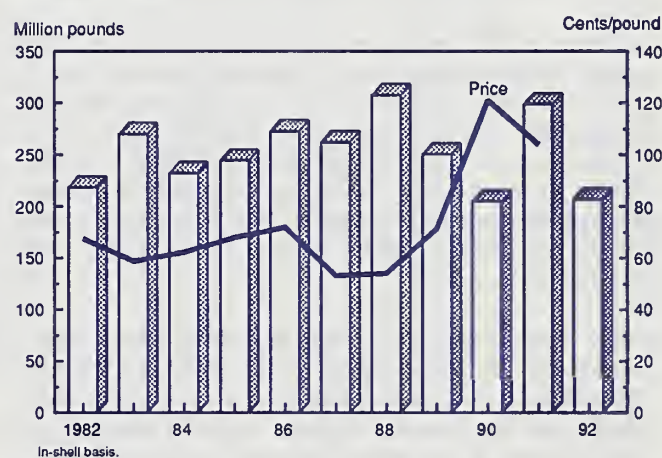
California Almonds: Exports by Destination, 1991/92



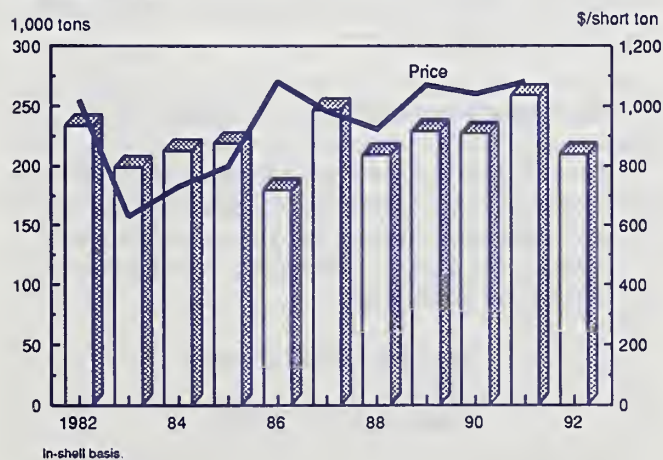
Hazelnuts: Production and Season-Average Grower Price



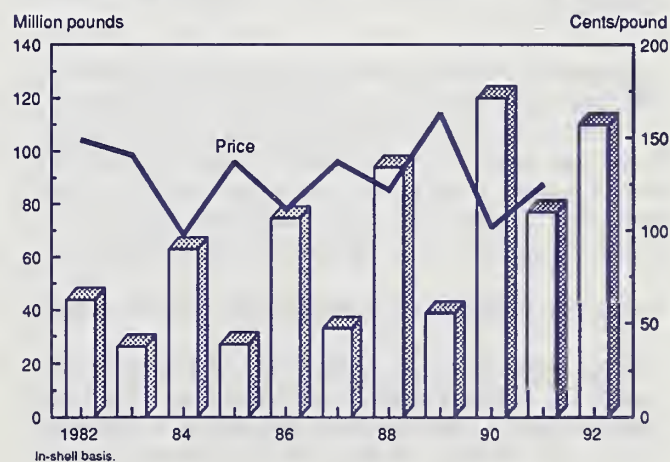
Pecans: Production and Season-Average Grower Price



Walnuts: Production and Season-Average Grower Price



Pistachios: Production and Season-Average Grower Price



The final pecan production estimate for 1991 was revised up 22 percent following larger-than-expected crops in several States, especially Texas, Louisiana, and Georgia.

In September, opening pecan price bids were higher than last year's, but about the same as the 1991/92 seasonal peak in November and December. Smaller U.S. supplies may raise the 1992/93 season-average grower price for pecans above the 1991/92 average of \$1.04 per pound (in-shell).

Trade sources indicate a 10 percent larger 1992/93 crop in Mexico. Mexico will likely increase pecan exports to the United States and partially dampen the effect of the smaller U.S. crop. About half of Mexico's pecan orchards are in early stages of production, which will substantially increase export potential during the next several years.

World Walnut Supplies Down in 1992/93

Walnut production in 1992/93 for the six leading producing countries (the United States, China, Turkey, France, India, Italy) is estimated at 1.07 billion pounds (in-shell basis), down 3 percent from 1991/92. The 1992/93 supply, including carryover stocks, will reach 1.25 billion pounds, also down 3 percent. A smaller U.S. crop more than offset larger crops in the other five countries.

California's 1992 walnut crop is forecast at 420 million pounds (in-shell basis), down 19 percent from last year's record primarily because of the alternate-year bearing characteristic of walnut trees. The nut set per tree is down 30 percent this year, but nut sizes are large. While weather for most of the season was favorable for walnut development, high temperatures in August and September, and the incidence of blight, reduced kernel quality and potential shellout.

Lower production and normal beginning stocks have reduced the U.S. walnut supply in 1992/93 to an estimated 228 million pounds (shelled basis), down 12 percent from 1991/92 and the lowest in 6 years. An excellent-quality 1991 crop led to record-high domestic and export shipments despite higher prices. The season-average grower price for walnuts in 1991/92 was 54 cents per pound (in-shell), tying the record set in 1986/87. Reduced U.S. supplies may push the average grower price to a new record in 1992/93.

Higher prices will likely lower per capita walnut consumption from 0.52 pounds in 1991/92 to 0.49 in 1992/93. Domestic shipments of shelled and in-shell walnuts for the first 3 months of 1992/93 (August-October) were down 26 and 14 percent, respectively, from a year earlier. Larger production outside the United States may reduce U.S. walnut exports and moderate domestic price increases.

Large U.S. Pistachio Crop Replenishes Meager Stocks

The September 1 forecast for the 1992 California pistachio crop is 110 million pounds (in-shell basis), up 43 percent from last year. The increase in production is primarily due to the alternate bearing cycle of pistachio trees.

Although the number of clusters is a record high this year, the amount of blanks is higher than last year, and the number of nuts per cluster is much lower than in the past. Pistachio bearing acreage increased 3 percent from a year earlier.

The large crop offsets beginning stocks that were at a 4-year low. Total pistachio supplies are estimated to be up 5 percent from 1991/92, but 15 percent below the record set in 1990/91.

In 1991/92, the season-average grower price for pistachios was \$1.25 per pound (in-shell), up from \$1.02 in 1990/91 when the United States had record supplies. The higher prices reduced per capita consumption (shelled basis) from 0.12 pounds from 1990/91 to 0.10 pounds in 1991/92. Larger U.S. supplies in 1992/93 should moderate pistachio prices, increasing consumption. Assuming strong export and domestic demand, ending stocks in August 1993 are expected to be near the 1991/92 low. A small crop in 1993, combined with low stocks, could push 1993/94 supplies far below the average supply of the last 3 years.

Macadamia Nut Prices Drop Again in 1991/92

Growing world production of macadamia nuts has pressured grower prices in recent years, reversing a decade of generally rising prices. A lower price accompanied smaller Hawaiian crops the past three seasons. In 1991/92, the average net, wet-in-shell grower price was 70.0 cents per pound, 12 cents below the 1990/91 average and the lowest in 7 years. The 1991/92 crop was 14.9 million pounds (shelled basis), down 1 percent from a year earlier. Lower prices and production dropped the 1991/92 farm value of production by 15 percent to \$34.7 million.

Dry conditions during the spring of 1992 have caused concern for the outlook of the 1992/93 macadamia crop in Kona and South Kona regions on the island of Hawaii. The first forecast for the 1992/93 crop will be released in January 1993. The State's total acreage and bearing acreage both declined about 1 percent in 1991/92 from the year earlier.

All but about 3 percent of the State's macadamia nut farms are located on the Big Island. Damage from Hurricane Iniki was minimal because most of the orchards were not in the storm's path.

U.S. Macadamia Nut Study Conducted

The U.S. International Trade Commission (USITC) has completed a study of the economic and competitive conditions affecting the U.S. macadamia nut industry. For a copy of the report, request publication number 2573, from:

The Office of the Secretary
USITC
Washington, DC 20436

Table 25--Tree nuts: Production in principal States, 1988-91, and indicated 1992

| Crop and State | 1988 | 1989 | 1990 | 1991 | Indicated 1992 |
|--------------------------|---------|---------|---------------------------------|---------|-------------------|
| | | | 1,000 pounds (shelled basis) | | |
| Almonds: | | | | | |
| California | 590,000 | 490,000 | 660,000 | 490,000 | 550,000 |
| | | | (in-shell basis) | | |
| Hazelnuts: | | | | | |
| Oregon | 32,600 | 25,600 | 43,000 | 50,600 | 53,400 |
| Washington | 400 | 400 | 400 | 400 | 400 |
| 2 States | 33,000 | 26,000 | 43,400 | 51,000 | 53,800 |
| Walnuts, English: | | | | | |
| California | 418,000 | 458,000 | 454,000 | 518,000 | 420,000 |
| Macadamia nuts: | | | | | |
| Hawaii | 45,500 | 50,500 | 50,000 | 49,500 | -- |
| Pistachios: | | | | | |
| California | 94,000 | 39,000 | 120,000 | 77,000 | 110,000 |
| Pecans: | | | | | |
| Alabama | 10,000 | 22,000 | 5,000 | 18,000 | 9,000 |
| Arkansas | 3,000 | 1,000 | 250 | 3,000 | 1,500 |
| California | 2,200 | 2,000 | 2,800 | 2,300 | 2,900 |
| Florida | 6,000 | 7,000 | 3,600 | 3,500 | 3,500 |
| Georgia | 110,000 | 85,000 | 65,000 | 100,000 | 60,000 |
| Louisiana | 22,000 | 14,000 | 6,000 | 27,000 | 5,000 |
| Mississippi | 10,000 | 8,500 | 2,200 | 7,500 | 2,000 |
| New Mexico | 26,000 | 29,000 | 34,000 | 29,000 | 29,000 |
| North Carolina | 5,500 | 700 | 400 | 5,500 | 2,000 |
| Oklahoma | 47,000 | 9,000 | 5,000 | 17,000 | 11,000 |
| South Carolina | 6,500 | 1,000 | 500 | 5,500 | 500 |
| Texas | 60,000 | 55,000 | 60,000 | 60,000 | 60,000 |
| Other 1/ | -- | 16,300 | 20,250 | 20,700 | 20,600 |
| Total | 308,200 | 250,500 | 205,000 | 299,000 | 207,000 |
| Improved varieties 2/ | 185,500 | 161,000 | 143,500 | 163,300 | 135,900 |
| Native and seedling | 122,700 | 73,200 | 41,250 | 115,000 | 50,500 |

-- = Not available.

1/ Arizona, Kansas, Missouri, and Tennessee, beginning with the 1989 crop. No breakdown between varieties available.

2/ Budded, grafted, or topworked varieties.

Source: National Agricultural Statistics Service and Economic Research Service, USDA.

Table 26--Tree nuts: Supply and utilization, by commodity and marketing year, 1987/88-1992/93 forecast

| Commodity | Marketing year 1/ | Marketable | Imports | Beginning stocks | Market reserve 3/ | Total supply | Ending stocks | Exports | Domestic consumption | |
|-----------------------------|----------------------|------------------|---------|---------------------|----------------------|-----------------|------------------|---------|----------------------|---------------|
| | | production 2/ | | | | | | | Total | Per capita |
| --1,000 pounds (shelled) -- | | | | | | | | | | Pounds |
| Almonds | 1987/88 | 634,560 | 650 | 90,620 | 114,220 | 725,830 | 242,540 | 343,300 | 139,990 | 0.57 |
| | 1988/89 | 564,540 | 480 | 242,540 | 141,130 | 807,560 | 282,370 | 363,970 | 161,220 | 0.65 |
| | 1989/90 | 457,170 | 70 | 282,370 | 0 | 739,610 | 219,930 | 342,380 | 177,300 | 0.71 |
| | 1990/91 | 615,752 | 83 | 219,930 | 44,100 | 835,765 | 283,155 | 359,950 | 192,660 | 0.77 |
| | 1991/92 | 461,631 | 156 | 283,155 | 44,000 | 744,942 | 150,481 | 377,879 | 216,582 | 0.85 |
| | 1992/93 f | 523,000 | 220 | 150,481 | 0 | 673,701 | 125,749 | 360,000 | 187,952 | 0.73 |
| Hazelnuts | 1987/88 | 17,218 | 3,863 | 1,139 | 0 | 22,220 | 1,758 | 5,898 | 14,564 | 0.06 |
| | 1988/89 | 12,693 | 8,165 | 1,758 | 0 | 22,615 | 1,686 | 3,778 | 17,152 | 0.07 |
| | 1989/90 | 9,794 | 6,615 | 1,686 | 0 | 18,096 | 1,107 | 3,344 | 13,645 | 0.05 |
| | 1990/91 | 13,668 | 10,069 | 1,107 | 0 | 24,845 | 2,977 | 4,726 | 17,141 | 0.07 |
| | 1991/92 | 18,923 | 6,148 | 2,977 | 0 | 28,048 | 6,601 | 7,141 | 14,305 | 0.06 |
| | 1992/93 f | 19,300 | 5,000 | 6,601 | 0 | 30,901 | 6,000 | 8,000 | 16,901 | 0.07 |
| Pecans | 1987/88 | 121,136 | 12,966 | 63,423 | 0 | 197,525 | 62,520 | 3,935 | 131,071 | 0.54 |
| | 1988/89 | 135,030 | 2,718 | 62,520 | 0 | 200,267 | 70,785 | 5,885 | 123,598 | 0.50 |
| | 1989/90 | 101,989 | 9,992 | 70,785 | 0 | 182,766 | 58,260 | 9,509 | 114,997 | 0.46 |
| | 1990/91 | 97,530 | 27,816 | 58,260 | 0 | 183,606 | 45,892 | 17,389 | 120,325 | 0.48 |
| | 1991/92 | 118,933 | 20,157 | 45,892 | 0 | 184,982 | 50,327 | 16,884 | 117,771 | 0.46 |
| | 1992/93 f | 88,200 | 30,000 | 50,327 | 0 | 168,527 | 46,477 | 12,000 | 110,050 | 0.43 |
| Walnuts | 1987/88 | 204,292 | 470 | 28,343 | 0 | 233,105 | 59,954 | 59,243 | 113,908 | 0.47 |
| | 1988/89 | 169,916 | 184 | 59,954 | 0 | 230,054 | 48,231 | 60,263 | 121,560 | 0.49 |
| | 1989/90 | 195,594 | 137 | 48,231 | 0 | 243,962 | 54,196 | 66,896 | 122,870 | 0.49 |
| | 1990/91 | 180,800 | 96 | 54,196 | 0 | 235,091 | 48,736 | 63,902 | 122,453 | 0.49 |
| | 1991/92 | 210,436 | 65 | 48,736 | 0 | 259,237 | 55,689 | 72,386 | 131,162 | 0.52 |
| | 1992/93 f | 172,000 | 100 | 55,689 | 0 | 227,789 | 32,989 | 70,000 | 124,800 | 0.49 |
| Macadamias | 1987/88 | 12,810 | 2,090 | N/A | 0 | 14,900 | 0 | 632 | 14,268 | 0.06 |
| | 1988/89 | 13,650 | 2,503 | N/A | 0 | 16,153 | 0 | 1,259 | 14,894 | 0.06 |
| | 1989/90 | 15,150 | 4,343 | N/A | 0 | 19,493 | 0 | 3,000 | 16,493 | 0.07 |
| | 1990/91 | 15,000 | 4,815 | N/A | 0 | 19,815 | 0 | 4,000 | 15,815 | 0.06 |
| | 1991/92 | 14,850 | 3,190 | N/A | 0 | 18,040 | 0 | 5,000 | 13,040 | 0.05 |
| | 1992/93 f | 15,000 | 4,000 | N/A | 0 | 19,000 | 0 | 5,000 | 14,000 | 0.05 |
| Pistachios | 1987/88 | 14,579 | 2,166 | 15,005 | 0 | 31,750 | 5,487 | 3,469 | 22,794 | 0.09 |
| | 1988/89 | 44,752 | 854 | 5,487 | 0 | 51,093 | 14,897 | 6,442 | 29,754 | 0.12 |
| | 1989/90 | 18,029 | 1,018 | 14,897 | 0 | 33,945 | 10,045 | 2,904 | 20,996 | 0.08 |
| | 1990/91 | 42,047 | 617 | 10,045 | 0 | 52,709 | 16,864 | 6,041 | 29,805 | 0.12 |
| | 1991/92 | 25,474 | 160 | 16,864 | 0 | 42,498 | 6,072 | 10,432 | 25,994 | 0.10 |
| | 1992/93 f | 38,500 | 100 | 6,072 | 0 | 44,672 | 6,600 | 11,000 | 27,072 | 0.11 |
| Other Nuts 4/ | 1987/88 | 0 | 110,239 | N/A | 0 | 110,239 | 0 | 9,800 | 100,439 | 0.41 |
| | 1988/89 | 0 | 111,838 | N/A | 0 | 111,838 | 0 | 13,876 | 97,962 | 0.40 |
| | 1989/90 | 0 | 132,141 | N/A | 0 | 132,141 | 0 | 18,575 | 113,566 | 0.46 |
| | 1990/91 | 0 | 150,851 | N/A | 0 | 150,851 | 0 | 24,079 | 126,772 | 0.50 |
| | 1991/92 | 0 | 143,368 | N/A | 0 | 143,368 | 0 | 25,414 | 117,954 | 0.46 |
| | 1992/93 f | 0 | 150,000 | N/A | 0 | 150,000 | 0 | 25,000 | 125,000 | 0.49 |
| Total Nuts | 1987/88 | 1,004,595 | 132,444 | 198,530 | 114,220 | 1,335,569 | 372,258 | 426,277 | 537,034 | 2.20 |
| | 1988/89 | 940,581 | 126,742 | 372,258 | 141,130 | 1,439,581 | 417,970 | 455,472 | 566,139 | 2.30 |
| | 1989/90 | 797,727 | 154,316 | 417,970 | 0 | 1,370,013 | 343,538 | 446,608 | 579,867 | 2.33 |
| | 1990/91 | 964,798 | 194,346 | 343,538 | 44,100 | 1,502,682 | 397,624 | 480,088 | 624,970 | 2.49 |
| | 1991/92 | 850,246 | 173,244 | 397,624 | 44,000 | 1,421,114 | 269,170 | 515,136 | 636,808 | 2.51 |
| | 1992/93 f | 856,000 | 189,420 | 269,169 | 0 | 1,314,589 | 217,815 | 491,000 | 605,774 | 2.36 |

N/A = Not available. f = Forecast.

1/ Marketing season begins January 1 of first year indicated for macadamias; July 1 for almonds, hazelnuts, pecans, and other nuts; August 1 for walnuts; and September 1 for pistachios.

2/ Marketable production is used to calculate consumption which excludes inedibles and noncommercial usage.

3/ Market reserve allocated to domestic consumption, export or ending stocks.

4/ Includes Brazil nuts, cashew nuts, pignolias (Chinese pine nuts), chestnuts, and mixed nuts.

Source: Economic Research Service, USDA.

U.S. Fruit Industry and the North American Free Trade Agreement

by

Boyd M. Buxton

Abstract: The proposed North American Free Trade Agreement will permanently change the terms of trade between the United States, Mexico, and Canada by eliminating tariffs, quotas, and licenses. The current trade barriers for selected fruit commodities and the provisions under NAFTA for phasing them out, are reviewed in this article. Also the likely economic implications for the U.S. noncitrus and citrus industries are discussed.

Keywords: Tariffs, trade, fruit trade, NAFTA.

Introduction

On August 12, 1992, the United States, Canada, and Mexico concluded negotiations on the North American Free Trade Agreement (NAFTA). The agreement will eliminate most trade barriers, including tariffs, quotas, and licenses, among the three countries, either immediately or over a 15-year transition period. The agricultural provisions on market access under NAFTA are bilateral, with separate rules for U.S.-Mexican trade and Canadian-Mexican trade. The U.S.-Canadian trade arrangements will continue to be implemented as specified in the U.S.-Canada Free Trade Agreement that was enacted in 1988 and became effective on January 1, 1989. If approved by the legislatures of the three countries, NAFTA could be in effect on January 1, 1994. This article summarizes the current policies and proposals under NAFTA and the likely effect of NAFTA on the U.S. fruit industry.

Noncitrus Fruit

Current Policies and Proposals Under NAFTA

Mexico imposes a 20-percent tariff on most fresh fruits. Under NAFTA, Mexico will immediately cut the tariff to 15 percent for pears, quinces, and plums and phase out this reduced tariff over 5 years. The current 20 percent tariff for peaches and nectarines will be phased out over 10 years. The 20-percent tariff on fresh strawberries will be eliminated immediately under NAFTA, and the 20-percent tariff on frozen strawberries will be reduced to 14 percent, then phased out over a 10-year period. Under NAFTA, Mexico will replace its import licensing requirements with a 20-percent tariff for fresh grapes. The tariff will be eliminated immediately for the October 15 to May 31 period, and, for imports during the rest of the year, phased out over a 10-year period.

Under NAFTA, Mexico will apply a tariff-rate quota safeguard for apples from the United States. This safeguard will allow 55,000 metric tons (about 2 percent of U.S. fresh-market apples) to be exported to Mexico annually at the preferential NAFTA tariff rate. Their in-quota tariff, currently 20 percent, will be phased out over 10 years. The over-quota tariff will continue at 20 percent or at Mexico's most-favored-nation tariff, whichever is lower. The 55,000 metric ton quota amount will grow at a 3-percent compounded annual rate over the 10-year transition period.

U.S. tariffs are less than 2 percent (ad valorem equivalent) for many fresh noncitrus fruits, including pears, apricots, peaches, grapes, plums, strawberries, raspberries, and bananas. U.S. tariff rates are more than 2 percent for mangoes, papayas, pineapples, figs, and dates. There is no U.S. tariff on fresh apples and cherries.

Under NAFTA, U.S. tariffs on pears, apricots, and peaches will be eliminated immediately. The U.S. tariff of 1.7 cents per kilogram (about 1.5 percent ad valorem equivalent) on fresh strawberries will be eliminated immediately and the 14-percent U.S. tariff on frozen strawberries will be phased out over a 10-year period. U.S. seasonal tariffs for fresh grapes from Mexico will be eliminated immediately.

Current Trade Patterns and NAFTA Implications

In 1991, the United States exported \$55 million of noncitrus fruit to Mexico and imported \$202 million from Mexico. These imports were mostly mangoes, strawberries, and grapes. Mexico's share of total U.S. exports recently has been about 3 percent for fresh apples, 21 percent for fresh pears, and 8 percent for fresh peaches. NAFTA will provide improved export opportunities to Mexico for some U.S. fruits, primarily peaches, pears, and apples.

With a NAFTA, U.S. exports to Mexico are projected to more than double for fresh apples and peaches, and almost double for pears, by the end of the transition period. The elimination of Mexican tariffs, combined with expanded demand in Mexico, would raise fresh peach prices and expand production in the United States about 6 percent from what they would be without NAFTA. Therefore, revenue for the U.S. peach industry is projected to increase about 12 percent, or \$37 million, annually by the time the Mexican tariff is phased out and NAFTA is fully implemented in 15 years.

Fresh apple prices and production in the United States are projected about 1 percent higher than they would be without NAFTA. Revenue for the U.S. apple industry is projected to increase about 1.3 percent, or \$18 million, annually by the time the Mexican tariff is phased out and NAFTA is fully implemented in 15 years. Fresh pear prices and production in the United States are projected to increase 1.25 percent from what they would be without NAFTA. Revenue for the U.S. pear industry is projected to increase about 3 percent, or \$9 million, annually by the time the Mexican tariff is phased out over a 5-year period and NAFTA is fully implemented in 15 years.

Lower Canadian tariffs under the U.S.-Canada Free Trade Agreement have contributed to higher prices in the United States, as U.S. exports of peaches and pears to Canada are projected to increase. Higher U.S. apple prices will tend to lower U.S. exports to Canada as apples are now traded duty free with Canada.

Citrus Fruit

Current Policies and Proposals Under NAFTA

Mexico has a 20-percent tariff on fresh oranges, grapefruit, and limes. The United States has a tariff of 2.2 cents per kilogram (about 8 percent ad valorem) for fresh oranges, limes, mandarins or tangerines, and grapefruit from August 1 to September 30. Under NAFTA, Mexico will adjust its orange and grapefruit tariffs immediately to be equal to U.S. tariffs on those commodities. Then, both countries will phase out tariffs on an identical schedule. The U.S. tariff is 9.25 cents per liter (about 28 percent ad valorem) for frozen concentrated orange juice (FCOJ) (single-strength equivalent).

Under NAFTA, the United States and Mexico will eliminate fresh orange tariffs immediately for the June 1 to November 30 period and will phase them out over a 5-year period for the December 1 to May 31 period. The United States and Mexico will eliminate grapefruit tariffs immediately for the August 1 to September 30 period and phase them out over a 10-year period for the remaining months of the year. The tariff for fresh limes will be phased out over a 10-year period in the United States and immediately in Mexico. U.S. tariffs for FCOJ will be

reduced by one-half immediately on a quota of 40 million gallons (single-strength equivalent or 9.9 million gallons of 42-degree-Brix concentrate) of Mexican imports. The tariff on over-quota imports will be reduced 15 percent during the first 6 years of NAFTA, held constant for the next 4 years, then phased out over the remaining 5 years of the 15-year phase in period.

Current Trade Patterns and NAFTA Implications

Mexico and the United States engage in two-way trade in fresh oranges. In 1991, the crop year affected by the California freeze, Mexico exported substantial quantities of fresh oranges to the United States (26,051 metric tons or 2.7 percent of U.S. total consumption). In that year, U.S. exports to Mexico fell to almost zero. The United States will increase fresh orange exports to Mexico under NAFTA.

The United States imports 25 to 50 percent of its orange juice consumption but only about 10 percent of U.S. imports (2.5 to 5 percent of U.S. consumption) come from Mexico. NAFTA will gradually eliminate the duties on Mexican orange juice (FCOJ and single strength), but the effect on the U.S. orange juice industry will be moderated by the importance of Brazil in the world orange juice market. At the end of the transition period for NAFTA, Mexican prices for FCOJ at the border are projected to be about 30 percent higher, while U.S. prices are projected to be about 1 percent lower.

Total U.S. FCOJ imports were 94 million gallons of 42 degree Brix (or 380 million gallons of single-strength equivalent) in 1989, about typical for imports except in 1990 when Florida experienced severe freeze damage. U.S. FCOJ imports will decline as new orange groves in Florida come into production over the next decade. However at the end of the transition period, U.S. imports from Mexico will be about 3-4 percent higher with NAFTA than without NAFTA. Growth in Mexican income due to NAFTA will increase consumption in Mexico, moderating the increase in the amount of Mexican orange juice available for export to the United States under NAFTA.

Mexico exports about 6 percent of its limes, mostly to the United States. U.S. lime imports from Mexico represents about one-half of total U.S. consumption. U.S. lime prices will be about 3 percent lower with the NAFTA than they would be without it. Fresh lime imports from Mexico, which are likely to increase even without a NAFTA, will be about 4 percent higher with NAFTA.

Phytosanitary and Food Safety Safeguards Are Part of NAFTA

U.S. phytosanitary restrictions will remain in effect for the United States, Canada, and Mexico. NAFTA explicitly

recognizes each country's right to protect its plant health, but will place added emphasis on the scientific basis of any phytosanitary regulations. NAFTA also includes safeguards for consumers by permitting each country to maintain its own health and safety standards for imported foods, including the prohibition of imports of food products that do not meet pesticide and chemical-residue standards. NAFTA also has provisions that facilitate the resolution of any disputes among the three countries over violations of NAFTA rules. NAFTA is expected to bring a closer trade relationship and more uniform regulations between the countries.

Conclusion

U.S. fruit exports to Mexico have increased since Mexico joined the General Agreement of Tariffs and Trade (GATT) in 1986, when it lowered their tariffs and reduced the number of commodities subject to import licensing regulations. NAFTA will gradually eliminate Mexican tariffs for U.S. fruit commodities. This, combined with the expected growth in disposable income in Mexico, will likely provide added export opportunities for the U.S. fruit industry there. The phase out of Canadian tariffs under the U.S.-Canada Free Trade Agreement will also continue to help increase U.S. exports of some fruits.

The NAFTA will provide improved export opportunities for U.S. fresh oranges in Mexican markets, especially for high-quality fruit. The pace of gradual tariff elimination for fresh oranges will be equal in the two countries. U.S. tariffs for sensitive citrus imports from Mexico, particularly on imports expected to increase, such as limes and FCOJ, will phase out slowly, with safeguards and other measures to ease the transition.

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Table A-1--U.S. trade with Mexico for selected fruit commodities, 1989 to 1991

| Item | U.S. trade with Mexico | 1989 | 1990 | 1991 | 3-year average |
|-------------------------|---------------------------|--------|--------|--------|-------------------|
| --\$1,000-- | | | | | |
| NONCITRUS FRUITS | | | | | |
| Apples | U.S. exports | 4,755 | 6,852 | 12,125 | 7,911 |
| | U.S. imports | 0 | 0 | 0 | 0 |
| Pears/quinces | U.S. exports | 8,902 | 12,595 | 14,079 | 11,859 |
| | U.S. imports | 0 | 4 | 0 | 1 |
| Apricots | U.S. exports | 940 | 855 | 1,341 | 1,045 |
| | U.S. Imports | 0 | 0 | 0 | 0 |
| Peaches/nectarines | U.S. exports | 4,791 | 4,167 | 7,326 | 5,428 |
| | U.S. imports | 219 | 40 | 411 | 223 |
| Plums/prunes, plums | U.S. exports | 1,766 | 2,113 | 2,866 | 2,248 |
| | U.S. imports | 0 | 0 | 0 | 0 |
| Cherries | U.S. exports | 125 | 125 | 350 | 200 |
| | U.S. imports | 0 | 0 | 0 | 0 |
| Grapes, fresh | U.S. exports | 1,140 | 1,593 | 3,405 | 2,046 |
| | U.S. imports | 31,546 | 18,925 | 53,919 | 34,797 |
| Strawberries, fresh | U.S. exports | 347 | 192 | 540 | 360 |
| | U.S. imports | 13,548 | 13,074 | 15,844 | 14,155 |
| Strawberries, frozen | U.S. exports | 105 | 0 | 285 | 130 |
| | U.S. Imports | 12,535 | 23,689 | 21,391 | 19,205 |
| CITRUS FRUIT | | | | | |
| Oranges | U.S. exports | 940 | 1,488 | 90 | 839 |
| | U.S. imports | 250 | 908 | 16,830 | 5,996 |
| Mandarins/tangerines | U.S. exports | 10 | 35 | 75 | 40 |
| | U.S. imports | 3,167 | 4,550 | 3,383 | 3,700 |
| Lemons | U.S. exports | 556 | 373 | 18 | 316 |
| | U.S. imports | 0 | 9 | 16 | 8 |
| Limes | U.S. exports | 24 | 0 | 4 | 9 |
| | U.S. imports | 4,729 | 7,768 | 12,335 | 8,277 |
| Grapefruit | U.S. exports | 131 | 62 | 24 | 72 |
| | U.S. imports | 3 | 11 | 569 | 194 |
| FCOJ 1/ | U.S. exports | 30 | 788 | 208 | 342 |
| | U.S. imports | 45,345 | 65,971 | 41,424 | 50,913 |
| Orange juice, not conc. | U.S. exports | 0 | 84 | 229 | 104 |
| | U.S. imports | 10,360 | 15,333 | 3,487 | 9,727 |
| Orange juice, other | U.S. exports | 99 | 0 | 0 | 33 |
| | U.S. imports | 1,789 | 7,273 | 0 | 3,021 |

1/ Frozen concentrated orange juice.

Table A-2--U.S. tariff rates and phase-out period under NAFTA for selected fruit commodities

| Item | Season | Tariff | Phase-out |
|----------------------|---------------|-----------------|-------------|
| NONCITRUS | | | |
| Apples | Any time | Free | N.A. |
| Pears/quinces | Apr 1-June 30 | Free | N.A. |
| | Rest of year | 1.1 cents/kg | Immediately |
| Apricots | Any time | 0.4 cents/kg | Immediately |
| Peaches/nectarines | June 1-Nov 30 | 0.4 cents/kg | Immediately |
| | Rest of year | Free | N.A. |
| Plums/prunes, plums | Jan 1-May 15 | Free | N.A. |
| | Rest of year | 1.1 cents/kg | Immediately |
| Cherries | Any time | Free | N.A. |
| Grapes | Feb 15-Mar 31 | 1.41 dollars/cm | Immediately |
| | Apr 1-Jun 30 | Free | N.A. |
| | Rest of year | 2.12 dollars/cm | Immediately |
| Strawberries, fresh | Jun 15-Sep 15 | 0.4 cents/kg | Immediately |
| | Sep 16-Jun 14 | 1.7 cents/kg | Immediately |
| Strawberries, frozen | Any time | 14 percent | 10 years |
| CITRUS | | | |
| Oranges | Dec 1-May 31 | 2.2 cents/kg | 5 years |
| Oranges | Jun 1-Nov 30 | 2.2 cents/kg | Immediately |
| Grapefruit | Aug 1-Sep 30 | 2.2 cents/kg | Immediately |
| Grapefruit | Oct 1-Oct 31 | 1.82 cents/kg | 10 years |
| Grapefruit | Nov 1-Jul 31 | 2.9 cents/kg | 10 years |
| Mandarins/tangerines | Oct 1-Apr 30 | 2.2 cents/kg | 10 years |
| Mandarins/tangerines | May 1-Sep 20 | 2.2 cents/kg | 5 years |
| Lemons | Jan 1-Dec 31 | 2.75 cents/kg | 10 years |
| Limes | Jan 1-Dec 31 | 2.2 cents/kg | 10 years |
| Orange juice | Jan 1-Dec 31 | 9.25 cents/L | 1/ |

1/ United States will give Mexico annual access for 40 million gallons (single-strength equivalent) of FCOJ at one-half 9.25 cents/liter. Over-quota tariff of 9.25 cents/liter will be reduced 15 percent over first 6 years, stay constant for years 7 through 10, then phase-out in equal installments over the remaining 5 years. For single-strength orange juice, the United States will give Mexico annual access of 4 million gallons at one-half the 5.3 cents/liter. Over-quota tariff will be phased-out in equal installments over 15 years.

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